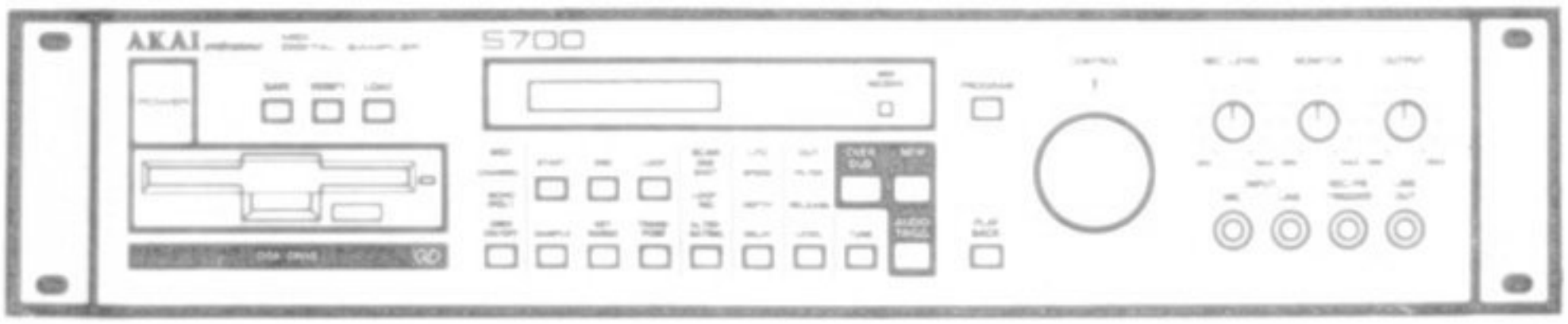
AKAI
professional

S700

MIDI DIGITAL SAMPLER



WARNING

To prevent fire or shock hazard, do not expose this appliance to rain or moisture.

Operator's Manual

Precautions

FOR CUSTOMERS IN THE UK

IMPORTANT FOR YOUR SAFETY

The flex supplied with your machine will have two wires as shown in the illustration.

TWO CORE FLEX IMPORTANT

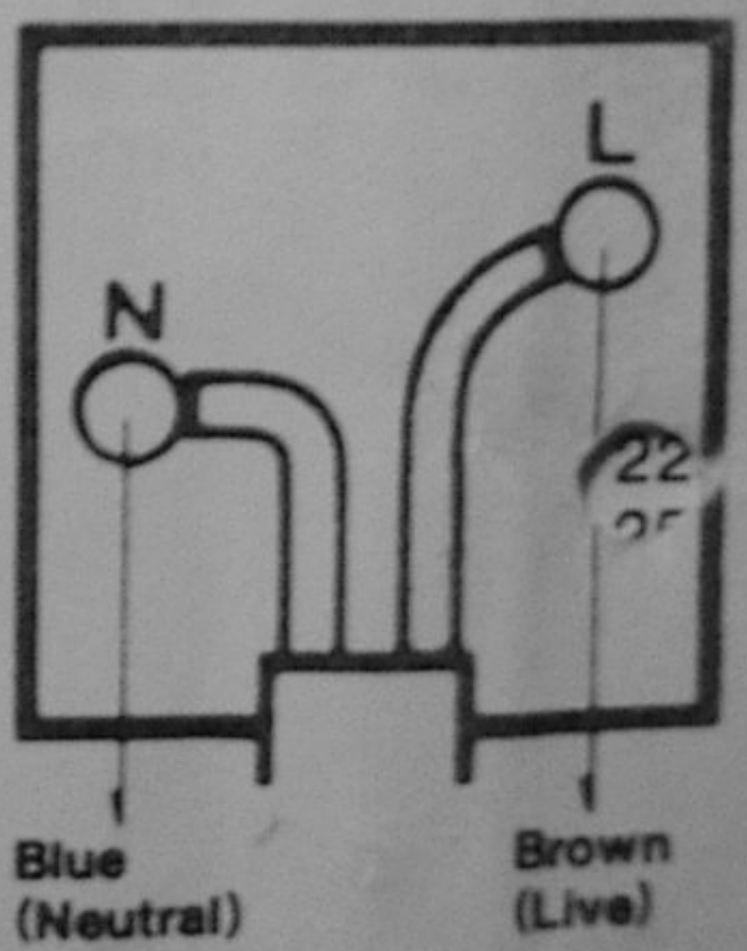
The wires in this mains lead are coloured in accordance with the following code:

Blue: Neutral

Brown: Live

As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows: The wire which is coloured blue must be connected to the terminal which is marked with the letter N or coloured black.

The wire which is coloured brown must be connected to the terminal which is marked with the letter L or coloured red.



- Do not connect any wire to the larger pin marked E or ⏚ when wiring a plug. Ensure that all terminals are securely tightened and that no loose strands of wire exist.

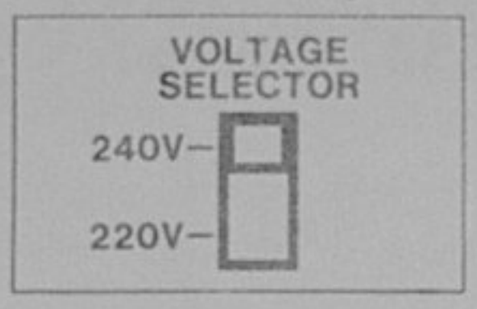
Warning

Power requirements

Power requirements for electrical equipment differ from area to area.
The operating voltage of this machine is preset at the factory according to it's intended destination. However, some models are equipped with a voltage selector. If your machine is so equipped, before connecting, check to see that the VOLTAGE SELECTOR on the rear panel is set to the voltage for your area.
If not, please set it correctly before plugging in the power cord.
220 V, 50 Hz for Europe except UK.
240 V, 50 Hz for UK and Australia.

If the VOLTAGE SELECTOR is not set for your area:

Confirm that the power cord is disconnected.
Move the VOLTAGE SELECTOR with a screwdriver so that the marker is above the voltage for your area.



What you should know to protect yourself and the Akai S700.

Watch out! You might get an electric shock.
- Never touch the plug with wet hands.
- Always pull out by the plug and never the cord.
- Only let a qualified professional repair or reassemble the Akai S700. An unauthorized person might touch the internal parts and receive a serious electric shock.
- Never allow a child to put anything, especially metal, into the Akai S700.

Let's protect the Akai S700 too.
- Use only a household AC power source. Never use a DC power source.
- If water is spilled on the Akai S700, disconnect it and call your dealer.
- Make sure that the Akai S700 is well ventilated and away from direct sunlight.
- To avoid damage to the internal circuits and the external surface, keep away from heat (stoves, etc.).
- Avoid using spray type insecticide near the Akai S700. It can damage the finish and might ignite suddenly.
- To avoid damaging the finish, never use denaturated alcohol, paint thinner or other similar chemicals to clean the Akai S700.
- Place the Akai S700 on a flat and solid surface.

To enjoy the Akai S700 for long time, please read this operator's manual thoroughly.
Should a problem persist, write down the model and serial numbers and all pertinent data regarding warranty coverage as well as a clear description of the existing trouble. Then, contact your nearest authorized Akai Service Station, or the Service Department of Akai Electric Company, Tokyo, Japan.

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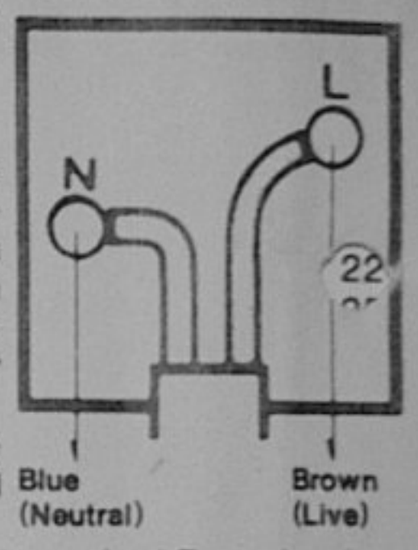


* Do not connect any wire to the larger pin marked E or ⏚ when wiring a plug. Ensure that all terminals are securely tightened and that no loose strands of wire exist.

Features

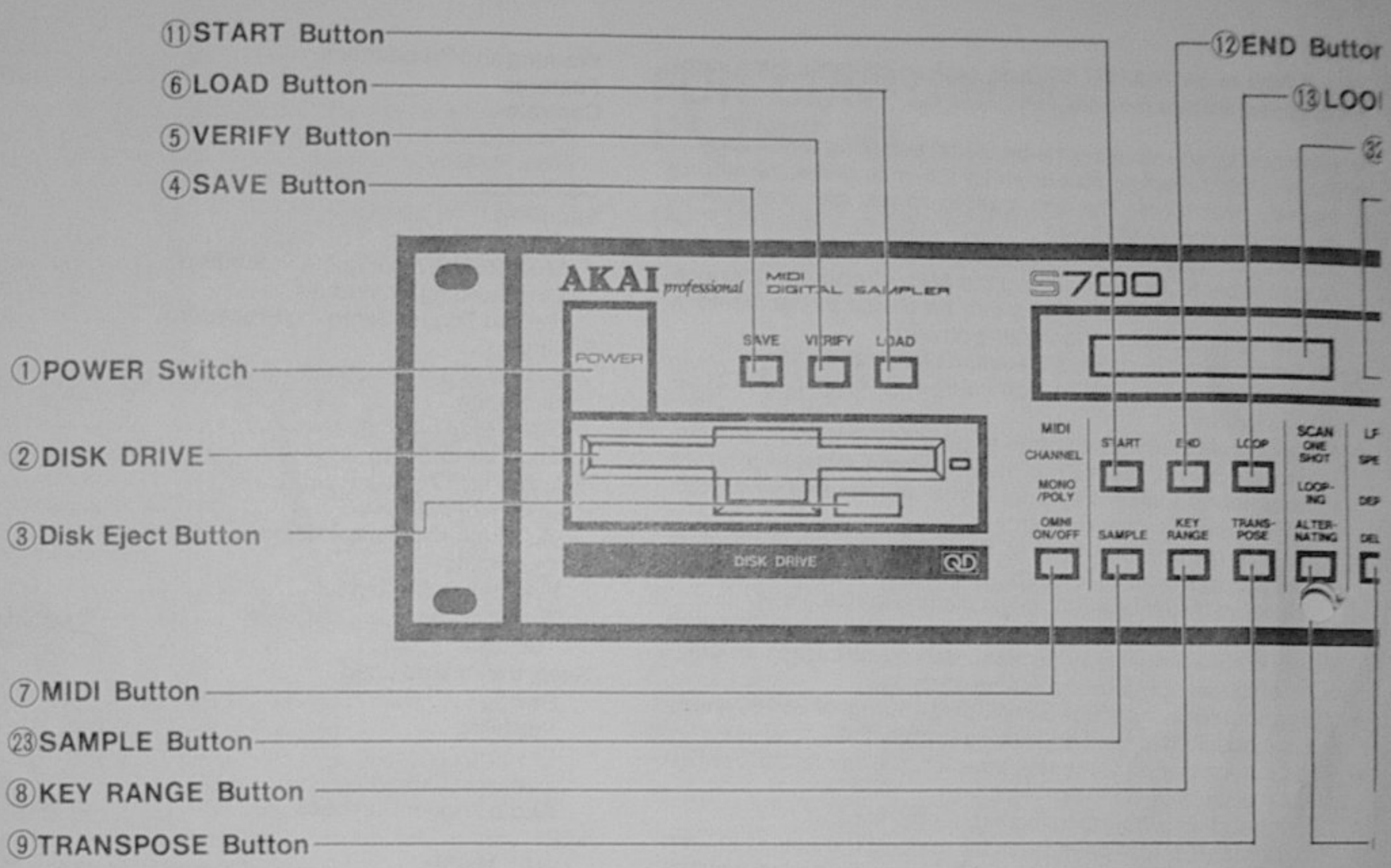
The S700 is an EIA/2U 19-inch rack mountable type sampling sound source module.

- High quality sound using 12-bit digital sampling technology.
- Built-in front loading disk drive for 2.8-inch disks, permitting speedy data file saving and loading so you can create your own sound source library.
- Random key splitting and assigning of a maximum of 6 voices (expandable to 16 voices using the ASK 70 optional board). A maximum of 32 combinations can be stored in the memory, providing limitless multi-sampling power.
- Maximum sampling time of 8 seconds for each voice.
- Easy operation and verification using a 15-character LCD dialogue system.
- Equipped with advanced scanning modes including looping, alternating, and reversing, making it possible to produce natural sound almost identical to the original and to sustain short sampled sounds smoothly.
- Auto-loop/automatic splicing system automatically selects the best splicing point for looping. The splicing point can also be selected by the operator in the manual splice mode.
- Sampled sound playback start and end points can be set at random so unnecessary portions can be cut. Reverse playback of the sampled sound is also possible.
- Transposing in halftone steps and tuning of ±100 cents make it possible to tune any sound to any pitch.
- Function for overdubbing the sampled sound makes it possible to mix multiple sounds.
- LFO for applying vibrato to the sampled sound.
- Programmable low-pass filter for making the sound milder. Furthermore, the low-pass filter effect can be varied according to the velocity, so natural dynamics can be achieved.
- Play button on front panel. Playback and verification of the sampled sound is possible without using a keyboard.
- Audio trigger input. Playback of the sampled sound can be started using such audio signals as pulse sounds or percussion sounds.

Table of Contents

Warning and Precautions 1
Features 2
Controls
  Front Panel 3
  Rear Panel 4
Connections 6
Sampling
  Basic Procedure 7
  Multiple Point Sampling Procedure 10
  Overdubbing Procedure 11
  Record Trigger Sampling Procedure 12
Editing
  S700 Editing Functions 13
  Scanning 14
  Start Point Editing 14
  End Point Editing 15
  Looping Editing 15
  LFO/Vibrato Effect 19
  OUT/Volume/Filter Effects 20
Programming
  Key Range Setting 22
  Transposing 25
  Tuning 27
Save, Verify, and Load
  Saving 28
  Verifying 29
  Loading 29
  Separate Output 30
  Audio Trigger Playback 31
MIDI
  MIDI Modes 34
  MIDI System 37
Specifications 38
MIDI Implementation Chart 39

3
Controls



① **POWER Switch**
Use this switch to turn the S700's power on and off.
NOTE: Connect MIDI cables and external equipment before turning the power on.

② **DISK DRIVE**
This disk drive is exclusively for use with 2.8-inch sampler disks. (See Page 28)
NOTE: Insert the sampler disk straight into the drive, pushing gently until it stops. Inserting at a slant or handling roughly will reduce the life of the disk.

③ **Disk Eject Button**
Press this button to eject the sampler disk.
NOTE: When the disk appears, pull it straight out gently.

④ **SAVE Button**
Press this button to save S700 voice data onto the sampler disk.

⑤ **VERIFY Button**
Press this button to verify the voice data stored on the sampler disk.

⑥ **LOAD Button**
Press this button to load voice data from the sampler disk into the S700.

⑦ **MIDI Button**
Press this button to set the MIDI channel or to switch the MIDI mode.

⑧ **KEY RANGE Button**
Use this button to set the key range for the sampled sound.

⑨ **TRANSPOSE Button**
Press this button to set or transpose the pitch of the sampled sound.

⑩ **PLAY Button**
When this button is pressed, the sampled sound is played back. Use this for example when editing to check the voice.

⑪ **START Button**
Press this button to set the start point for playback of the sampled sound.

⑫ **END Button**
Press this button to set the end point for playback of the sampled sound.

⑬ **LOOP Button**
Press this button to set the looping splicing point of the sampled sound.

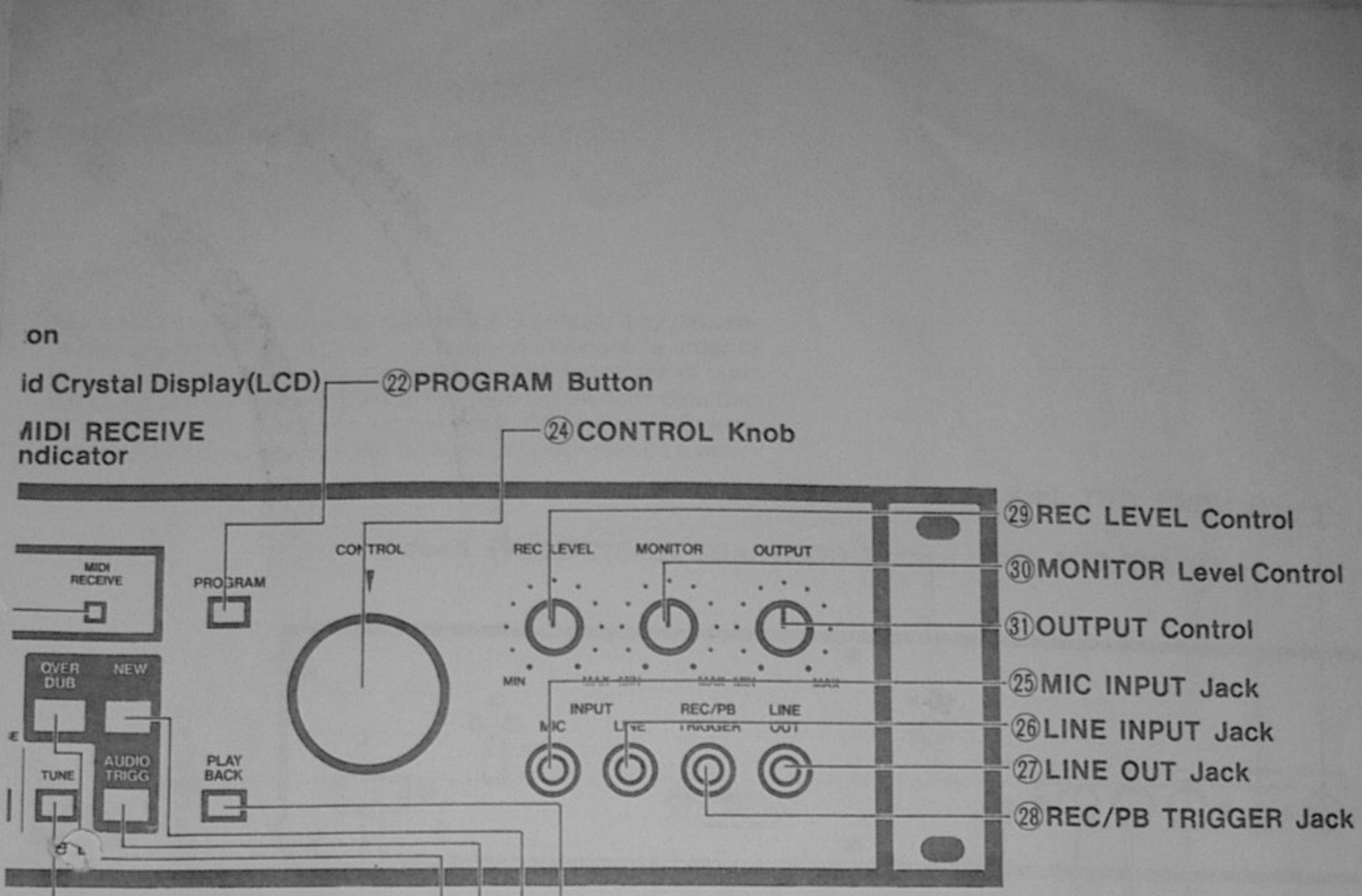
⑭ **SCAN Button**
Press this button to select the scanning mode for the sampled sound, either ONE SHOT, LOOPING, or ALTERNATING.

⑮ **LFO Button**
Press this button to set the speed, delay time, and depth of the vibrator effect applied to the sampled sound.

⑯ **OUT Button**
Press this button to set the output level, low-pass filter cut-off frequency, and release time.

⑰ **TUNE Button**
Press this button to tune the pitch of the sampled sound.

⑱ **AUDIO TRIGG Button**
Press this button to set the pitch and indicate that you wish to playback the sampled sound using external audio signals, for example from a mike or line.



⑲ **OVER DUB Button**
Press this button to sample while dubbing over various sounds.

⑳ **NEW Button**
Press this button to perform a new sampling. When this button is pressed, the previously sampled sound will be cleared.

㉑ **MIDI RECEIVE Indicator**
This button lights when MIDI signals have been received from a keyboard, sequencer, or other MIDI equipment.

㉒ **PROGRAM Button**
Press this button to store combinations of key range assignments for the sampled sound in the memory bank to recall bank numbers.

㉓ **SAMPLE Button**
Press this button to number the sampled sound.

㉔ **CONTROL Knob**
Use this knob to increase or decrease such values as the sample number, program number, or parameter, or to select modes (on/off, etc.). This knob operates in cooperation with the various mode buttons.

㉕ **MIC INPUT Jack**
Use this input jack to sample directly from a mike or guitar. This is a 6.3 mm ϕ phone plug jack with an input sensitivity of −60 dB.

㉖ **LINE INPUT Jack**
Use this input jack to perform sampling from the line out jack of a keyboard or other audio equipment. This is a 6.3 mm ϕ phone plug jack with an input sensitivity of −25 dB.
NOTE: When both the MIC and LINE input jacks are used, the MIC input is given priority.

㉗ **LINE OUT Jack**
This is an output jack for the sampled sound or the monitor sound. Connect it for example to an amplifier or mixer. This is a 6.3 mm ϕ phone plug jack.

㉘ **REC/PB TRIGGER Jack**
When a foot switch is connected to this jack, it can be used to begin sampling or for playback of the sampled sound.

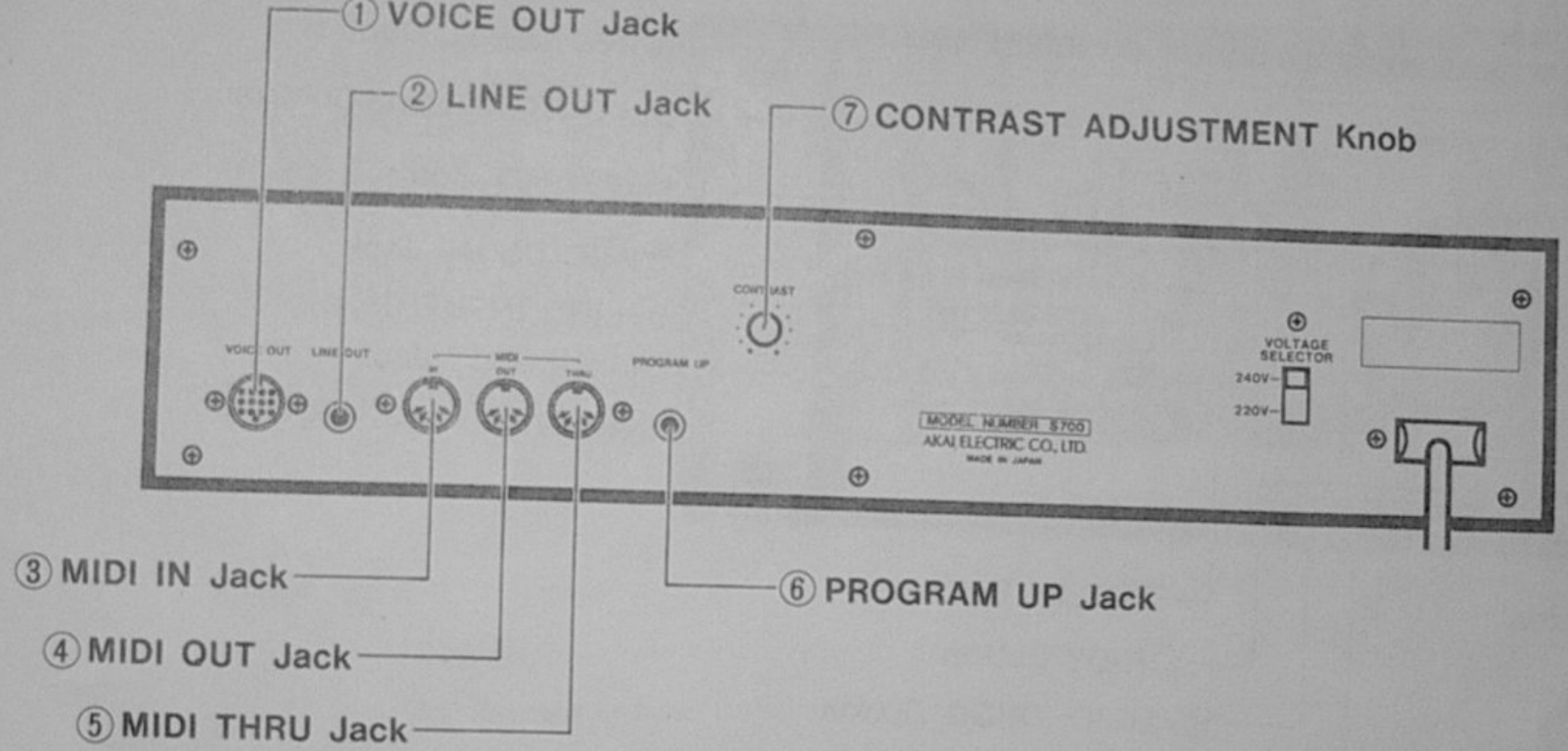
㉙ **REC LEVEL Control**
Use this control to adjust the sampling recording level.

㉚ **MONITOR Level Control**
Use this control to adjust the monitor level during sampling or over dubbing.

㉛ **OUTPUT Control**
Use this control to adjust the line output level.
NOTE: This output level is not stored in the memory as part of the voice data. Also, this control does not affect the level of the monitor sound.

㉜ **Liquid Crystal display (LCD)**
This is a 16-character liquid crystal display, used to display various messages and parameters.

5
Rear Panel



① **VOICE OUT Jack**
This is a 13-pin DIN jack from which 6 voice signals are output separately.

② **LINE OUT Jack**
This is an output jack for the sampled and monitor sound. Connect it for example to an amplifier or mixer. This is a 6.3 mm ϕ phone plug jack.
NOTE: There are two line output jacks, one on the front and one on the rear panel.

③ **MIDI IN Jack**
Use this to receive MIDI signals from other MIDI equipment.

④ **MIDI OUT Jack**
This MIDI OUT Jack is exclusively for use with MIDI systems.

⑤ **MIDI THRU Jack**
MIDI signals input to the MIDI IN Jack will be output un changed from this jack.

⑥ **PROGRAM UP Jack**
Use this jack for connection to a foot switch. When the foo switch is operated, the program number will increase.

⑦ **CONTRAST Adjustment Knob**
Use this knob to adjust the brightness of the liquid crystal display. Adjust according to the lighting conditions under which the S700 is operated.

Connections

The S700 is a MIDI digital sampler which is operated by data received at the MIDI IN Jack or external audio signals. In order to take full advantage of all the features and functions of your S700, use a MIDI keyboard which handles key velocity data (the AKAI MX73, AX73, or AX80 for example). Of course, MIDI keyboards which do not handle key velocity data can also be used.

Figure 1

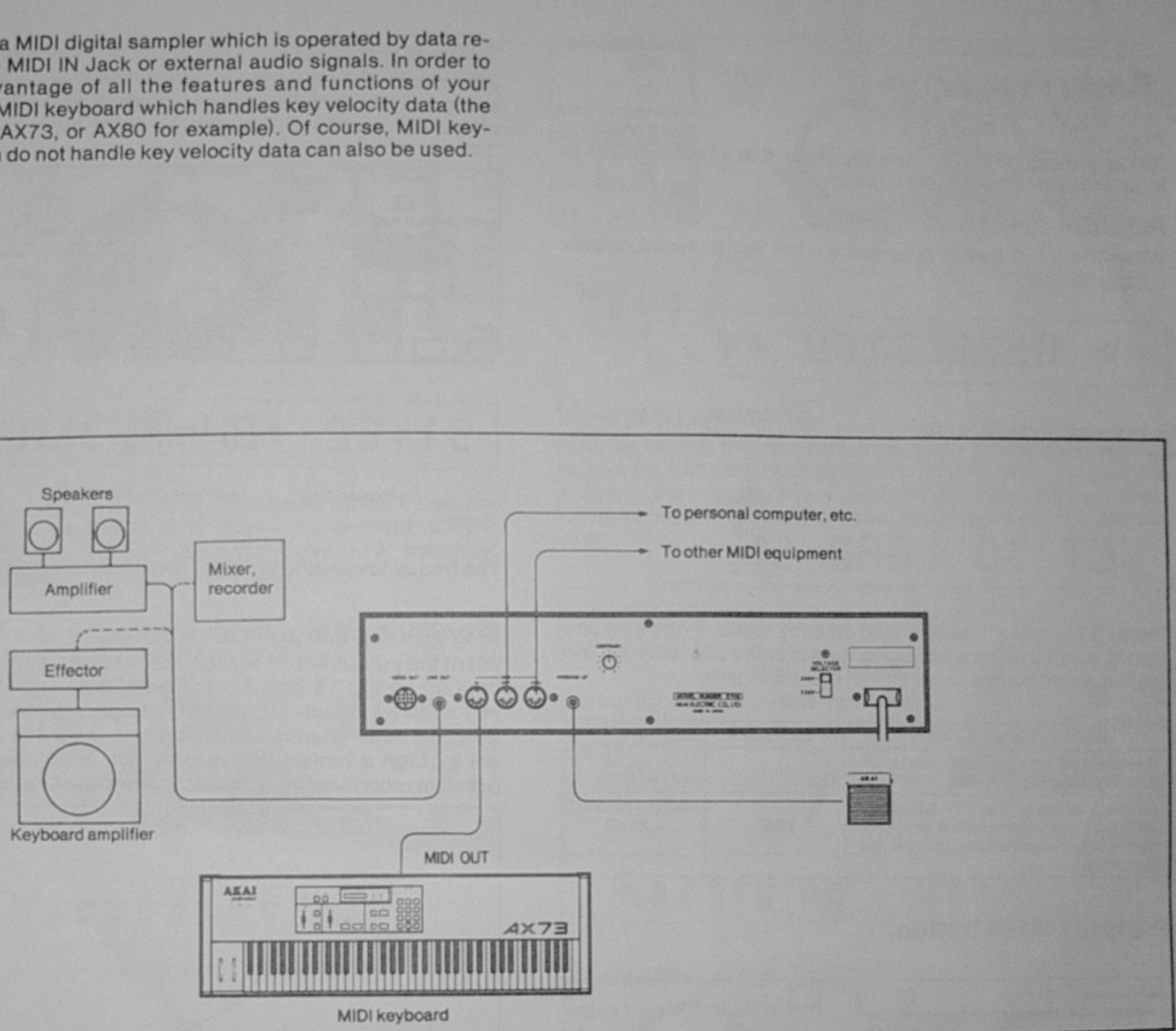
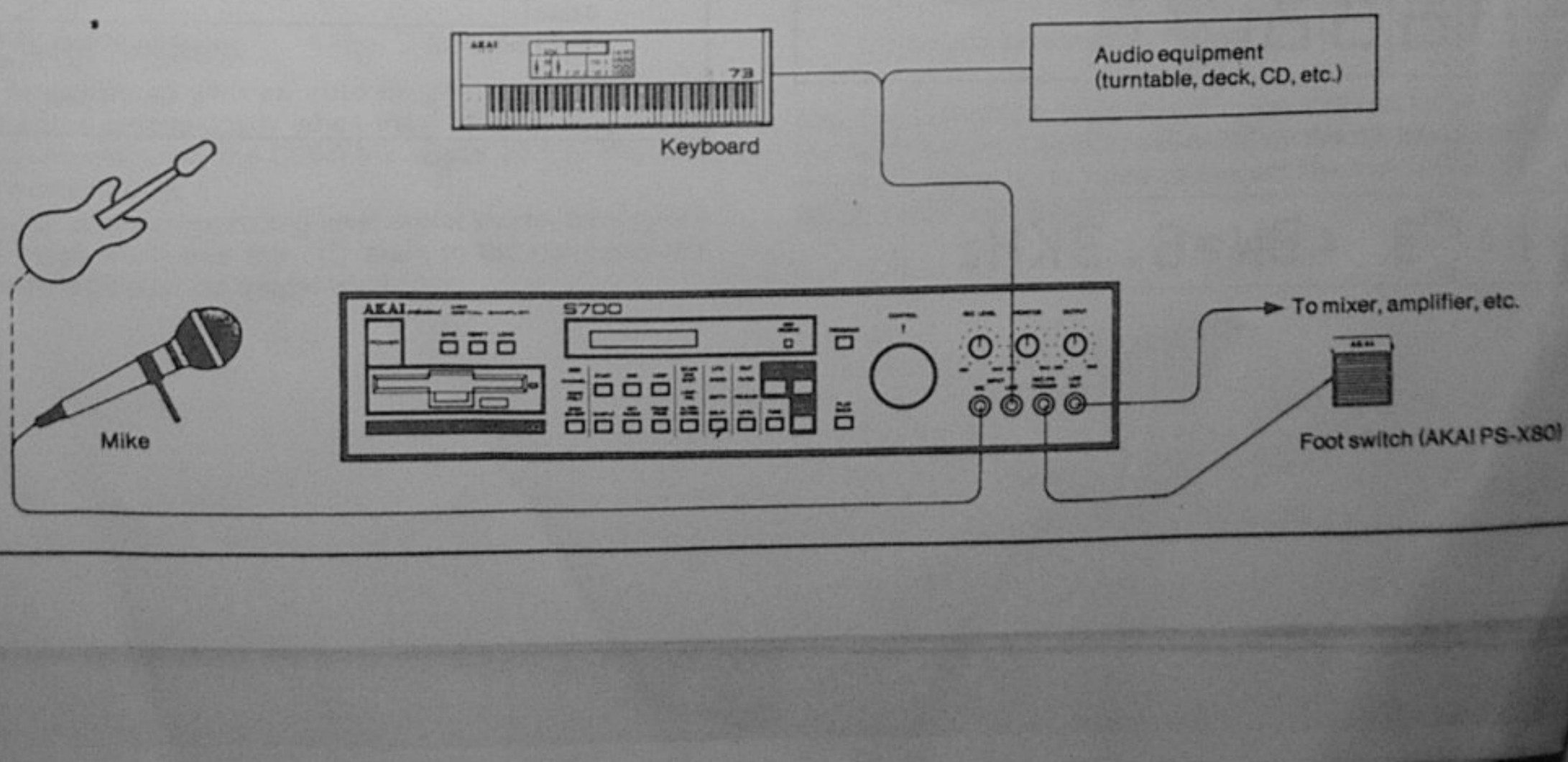


Figure 2



7

Sampling

Basic Procedure

First
Before turning the S700 power on, check that all connections to MIDI and audio equipment are proper.

POWER ON

When the S700 power is turned on, the liquid crystal display (LCD) will read:

```
** Akai S700 **
```

hen switch immediately to
SET TO LOAD SX

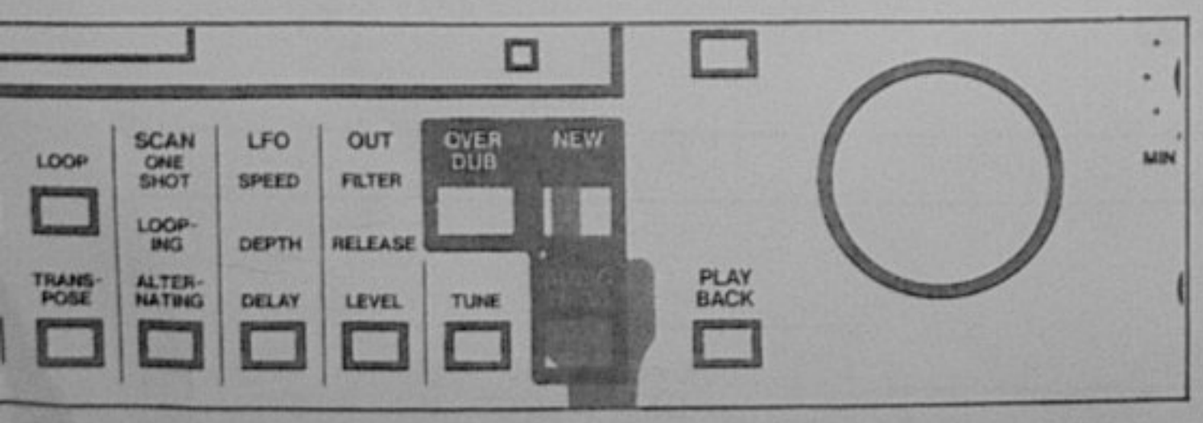
Flashing

```
SET TO LOAD SX
```

he S700 is now in the disk load standby mode. If however you vish to sample using a microphone or over the line, connect the lesired sound source to the MIC IN or LINE IN jack.

Equipment to be connected	Input jack	Input sensitivity
Equipment having a low output level such as a mike, electric guitar, etc.	MIC	−60 dB
Audio equipment such as a TV, cassette deck, CD, tuner, or preamplifier, or a synthesizer or keyboard having a high line output level	LINE	−26 dB

Press the NEW button.

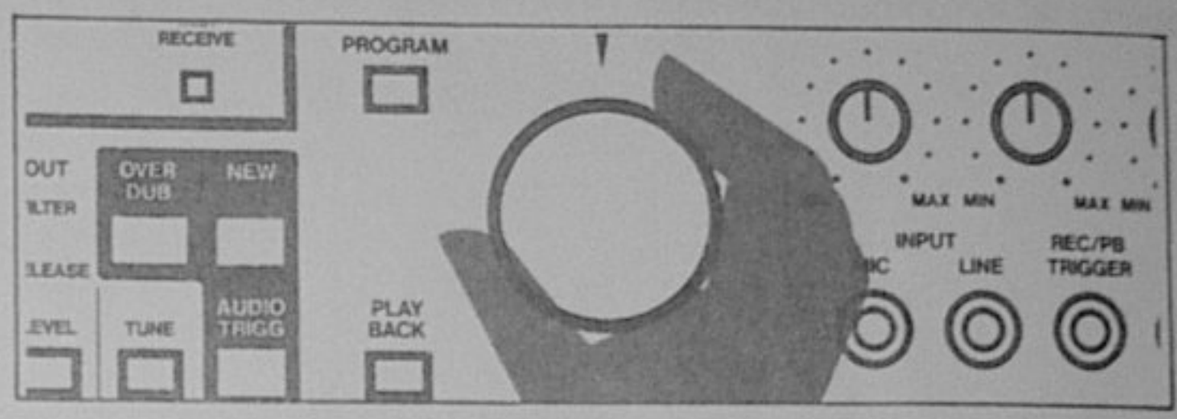


The following will appear on the LCD:

```
S1:C3  :BW=6.3KHz
```

Setting the Pitch

When the control knob is rotated, the reading on the LCD changes from C0 to B5. Set to the basic pitch for the sound you wish to sample. After this is done, press the NEW button.



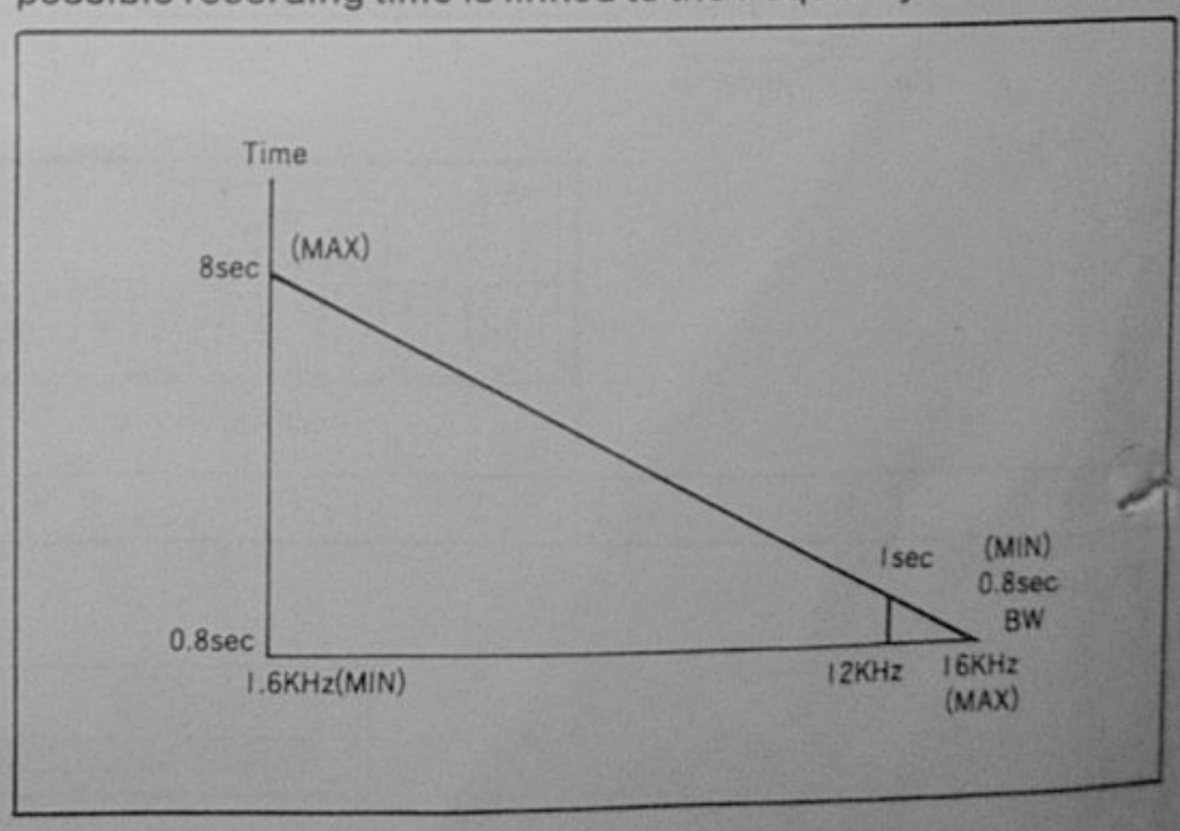

```
S1:C2  :BW=6.3KHz
```

Pitch setting — Frequency bandwidth setting

The frequency bandwidth (BW) setting is now flashing.

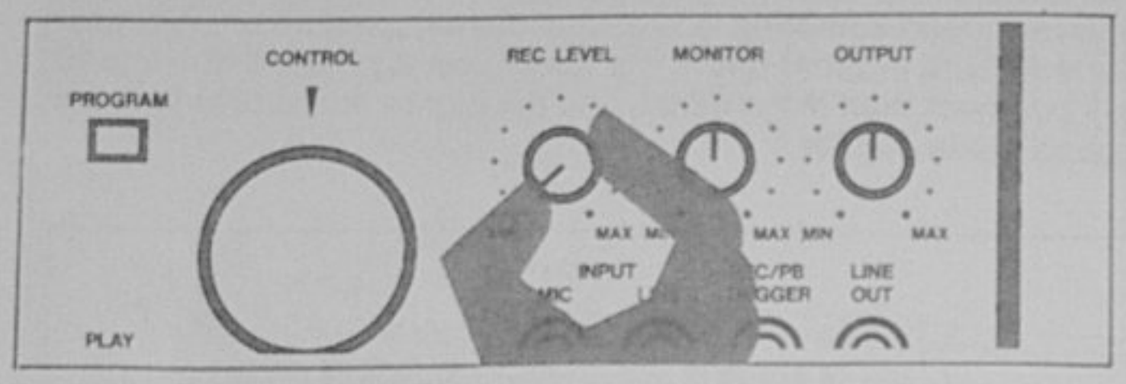
Frequency Bandwidth Setting

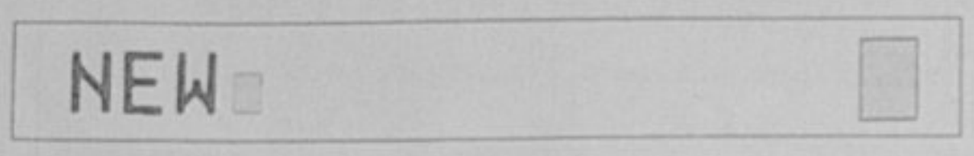
When the control kob is rotated, the reading on the LCD changes from 1.6 kHz to 16 kHz. Set to the optimum value for the sound you wish to sample. For brass, strings, sounds which shatter glass, or other sounds containing large amounts of harmonics, set as high a bandwidth as possible. Note however that the possible recording time is linked to the frequency bandwidth.



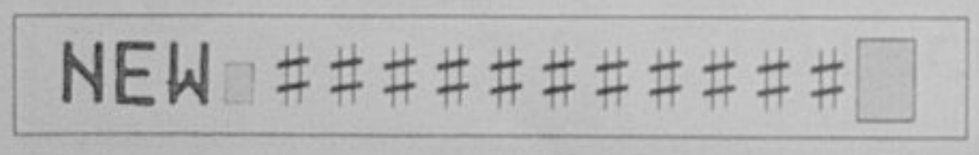
Recording Level Adjustment

After setting the frequency bandwidth, turn the REC LEVEL control to the MIN position and press the NEW button.





The LCD changes to the recording level meter mode. When the sound is input from the mike or over the line and the REC LEVEL control is slowly increased, the number of "#" marks on the LCD increases according to the volume.



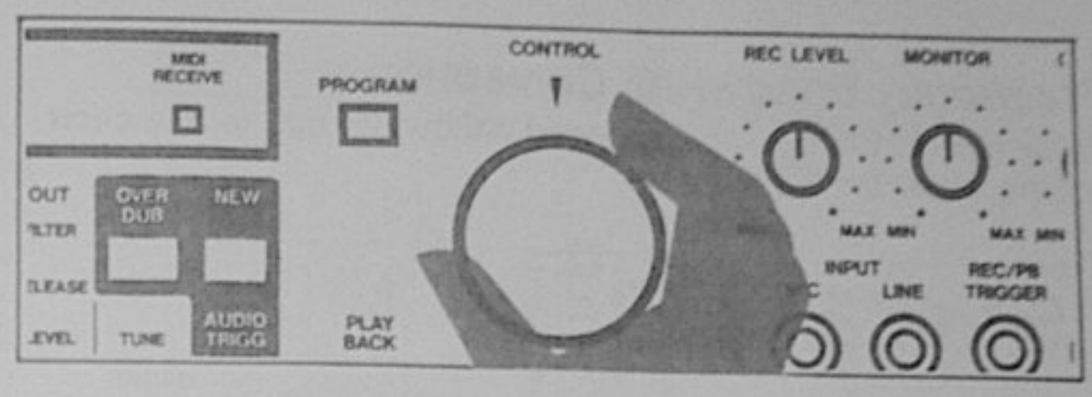
Level display

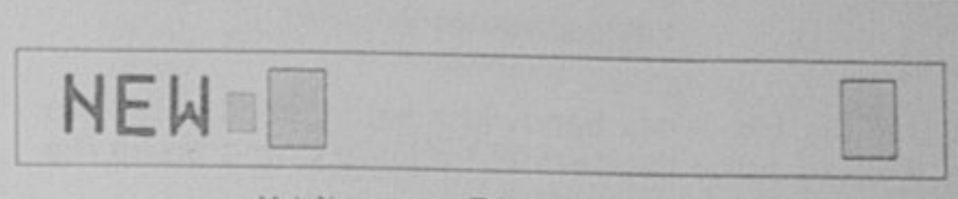
Adjust the REC LEVEL control to the point at which the sound is loudest and the □ mark is slightly flashing. Note that howling may result if the MONITOR LEVEL control is increased excessively when using a mike.

Trigger Level Setting

The S700 is equipped with an auto trigger function in which sampling begins automatically when there is an input source. Set the trigger level using the CONTROL knob so that the auto trigger function will work.

When the LCD is in the recording level meter mode, turning the CONTROL knob will move the □ mark to the right and left. This □ mark indicates the trigger level.

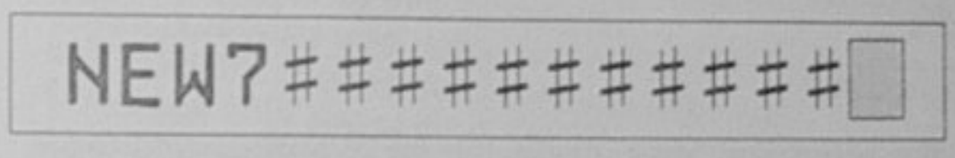




MIN ◄—— Trigger level setting ——► MAX

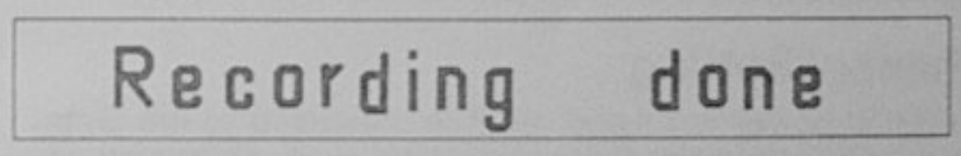
Now start sampling.

After adjusting the recording level, the S700 is now ready for recording. Press the NEW button once again. The □ mark will switch to the > mark, indicating that recording is possible. Also, when sound is input over the line, sampling will start automatically.



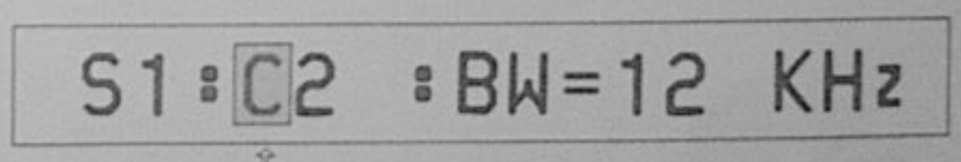
During sampling, the NEW value changes from 7 to 0. This is the sampling memory area monitor. Recording is possible until 0 is reached.

When the determined recording time is up, sampling stops, and the LCD reads:



Correcting pitch Setting

Press the NEW button.

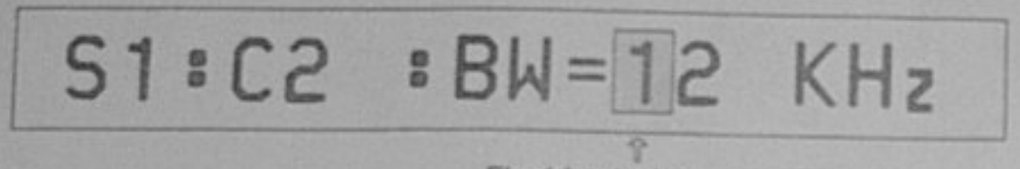


Pitch to be corrected

Use the CONTROL knob to set to the desired pitch then press the NEW button. The LCD will switch to the frequency bandwidth mode. If there is no need to correct the bandwidth, press the NEW button once again.

Frequency Bandwidth Correction

If you wish to correct the frequency bandwidth but not the pitch setting, press the NEW button.

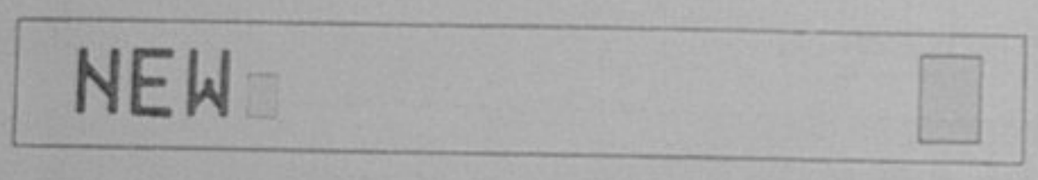


Flashing/value to be corrected

Set the LCD to the frequency bandwidth setting mode, use the CONTROL knob to set to the desired frequency, and press the NEW button.

Redoing Sampling

If there was simply a problem in the input source (for example, the mike position with respect to the sound source, the recording level, breathing sound, or noise), press the NEW button again and set the LCD to the recording level meter mode.



Readjust the recording level, press the NEW button, and input the source.

Playback of Sampled Sound

After sampling is completed, play back the sampled sound. When using a MIDI keyboard, check that the MIDI cables are correct and properly connected and that the MIDI IN jack on the S700 is connected to the MIDI OUT jack on the MIDI keyboard.

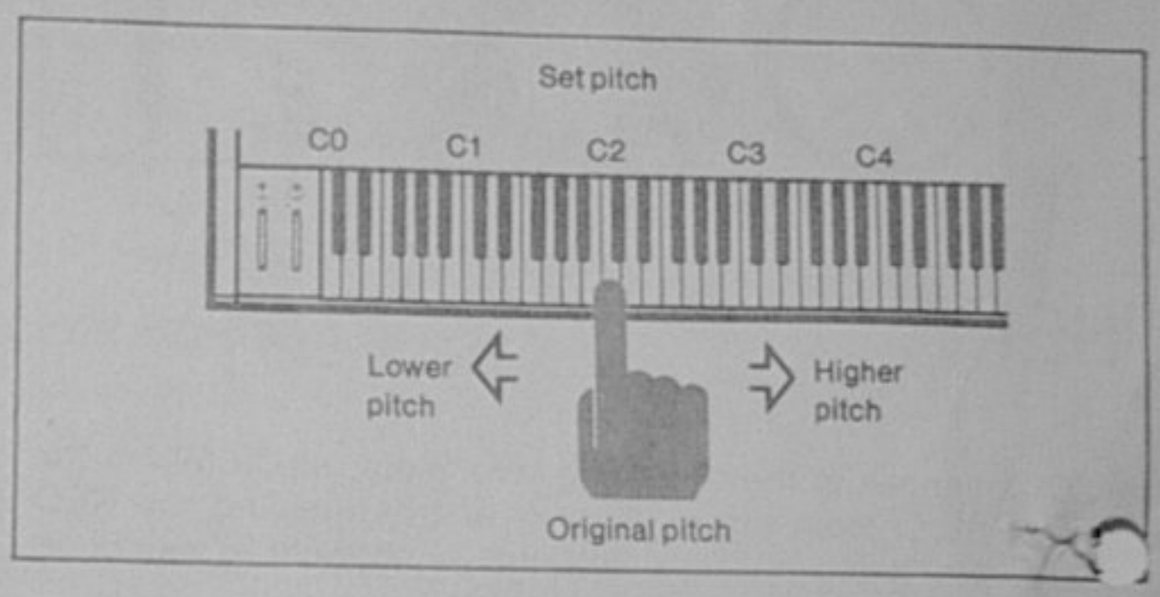
MIDI Channel Setting

When the S700 power is turned on, it is initialized to the Omni ON mode, so any of the MIDI channels 1 through 16 can be received.

If it is neccessary to set the MIDI channel, refer to Page 33.

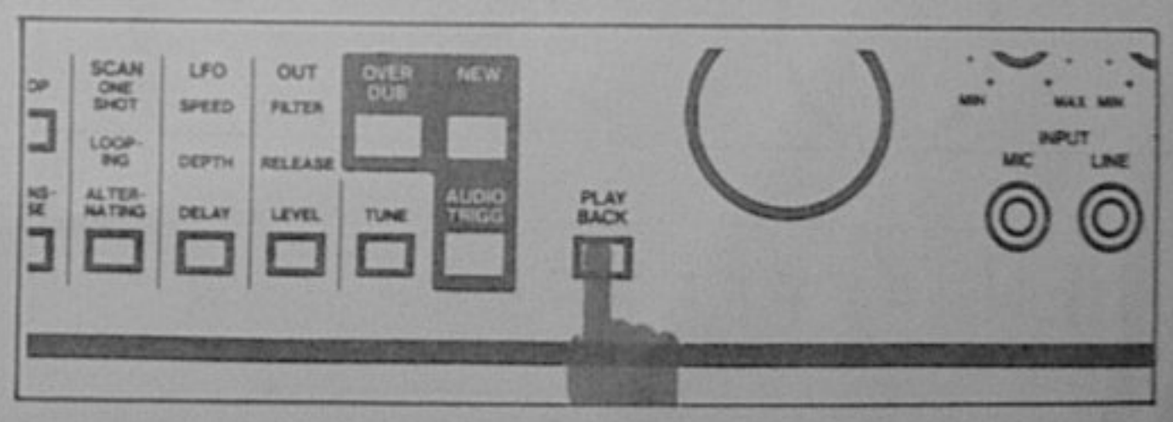
Playback

Check that the amplifier, mixer, etc. is correctly connected to the S700 LINE OUT jack and press a key on the MIDI keyboard. The sampled sound should be played back. When the key for the pitch set upon sampling is pressed, the sampled sound is reproduced at the original pitch. If a lower key is pressed, the sound will be lower than the original, and if a higher one is pressed, the sound will be higher.



Playback Using PLAY Button

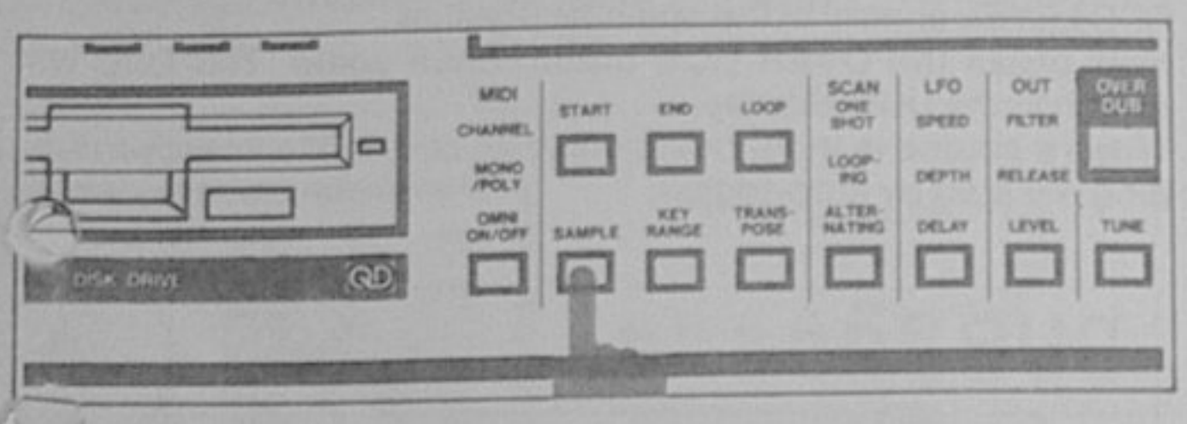
The S700 is equipped with a PLAY button on the front panel permitting immediate playback of the sampled sound, so the sampled sound can be checked without using a MIDI keyboard or any other equipment.



This is the basic procedure for sampling on the S700. Now let's see how multiple point sampling, one of the outstanding features of the S700, works.

Multiple Point sampling

Sampling data for a maximum of 6 sounds (expandable to 16 using options) can be stored in the S700's memory. For multiple point sampling, sampling is performed in the same way as for basic sampling, and numbers (S1—S6, or with options, S1—S16) are given to each sampled sound. For basic sampling, the initial sample number is S1. The SAMPLE button is used to indicate the sample number.



For sample number S1, use the basic sampling procedure. When S1 sampling is completed, the LCD will read:

```
Recording   done
```

To continue on from this point to sample number S2, press the NEW button. The LCD will read:

```
S1:C2  :BW=12  KHz
```

This shows the parameters for sample number S1, which has already been completed. Now press the SAMPLE button.

```
S1:C2  :BW=12  KHz
```

The "1" on the LCD will flash. This is the sample number setting mode. Now rotate the CONTROL knob and set a value between 1 and 6 (or 1 and 16 when using options).

```
S2:C2  :BW=12  KHz
```

Sample number set at S2

Once the sample number is set, press the NEW button. The LCD will switch to the basic pitch setting mode.

```
S2:C2  :BW=12  KHz
```

Now, using the same procedure as for basic sampling, set the basic pitch and frequency bandwidth and adjust the recording level.

NOTE: It is not possible to file all the data for voices S1—S6 (or S1—S16) on a single sampler disk. File one voice on each side of the disk. For details, refer to the section entitled "Save/Verify/Load".

Applications of Multiple Point sampling

When multiple point sampling is used, several different pitch ranges for say a piano, strings, or human voices can be sampled. Use multiple point sampling when you don't want the character of the sound to change because of differences in the pitch. Also use if for sampling sounds of nature, machines or those produced by synthersizers.

When sampling was made with S2, press the program button to set P2 for monitoring the S2 sampled sound.

Continue this procedure for S3 etc., to set the corresponding program number for monitoring.

Example S3 → P3, S4 → P4 . . . S16 → P16

Overdubbing

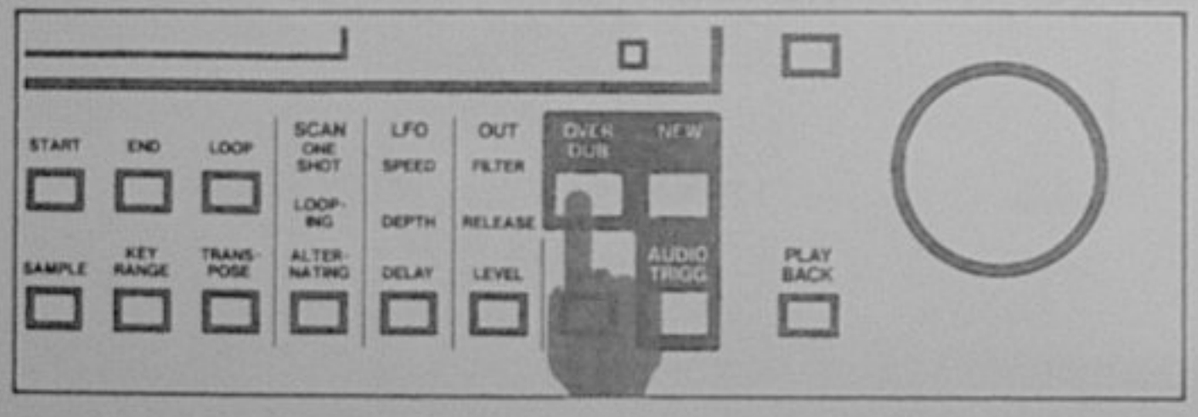
The S700 is equipped with an overdubbing function for sampled sounds. Sampling is performed in the same way as for basic sampling, except that an extra button is used. When you want to overdub, first sample the initial sound using the basic sampling procedure, but set the recording level relatively low. When overdubbing is performed, the overdubbed sound or sounds are recorded at the same level as the initial sound, so if the recording level of the initial sound is high, the overall level will be too high. Thus, set the recording level according to the number of sounds to be overdubbed to achieve a well-balanced level.
(Overdubbing is possible any number of times.)

Procedure

After the initial sound is sampled using the basic sampling procedure, the LCD will read

```
Recording        done
```

Now press the OVER DUB button.



The LCD will now be in the basic pitch setting mode.

```
S1:C2  :BW=12 KHz
```

Use the CONTROL knob to set the basic pitch of the next sound to be overdubbed, then press the OVER DUB button.

```
S1:C3  :BW=12 KHz
```

Next, use the CONTROL knob to set the frequency bandwidth, and press OVER DUB once again.

If you wish to use the same basic pitch and frequency bandwidth settings for the sound to be overdubbed as for the initial sound, press the OVER DUB button twice after the initial sampling is completed. The LCD will then change to the overdubbing recording level meter mode.

```
DUB
```

Prepare the input source for the second sampled and adjust the REC LEVEL control to the optimum position.
Now press the OVER DUB button once again. The LCD will switch to the DUB display.
When a source is input using the mike or over the line, overdubbing will start by auto-trigger.

```
DUB7#####
```

Overdubbing is possible until 0 is reached.

When overdubbing is completed, the LCD will read:

```
Recording        done
```

The above procedure can be repeated any number of times, so you can use this function for to create a 1-person choir, drover organ sounds using sine waves, and original special effects.

Should the overdubbing be ruined

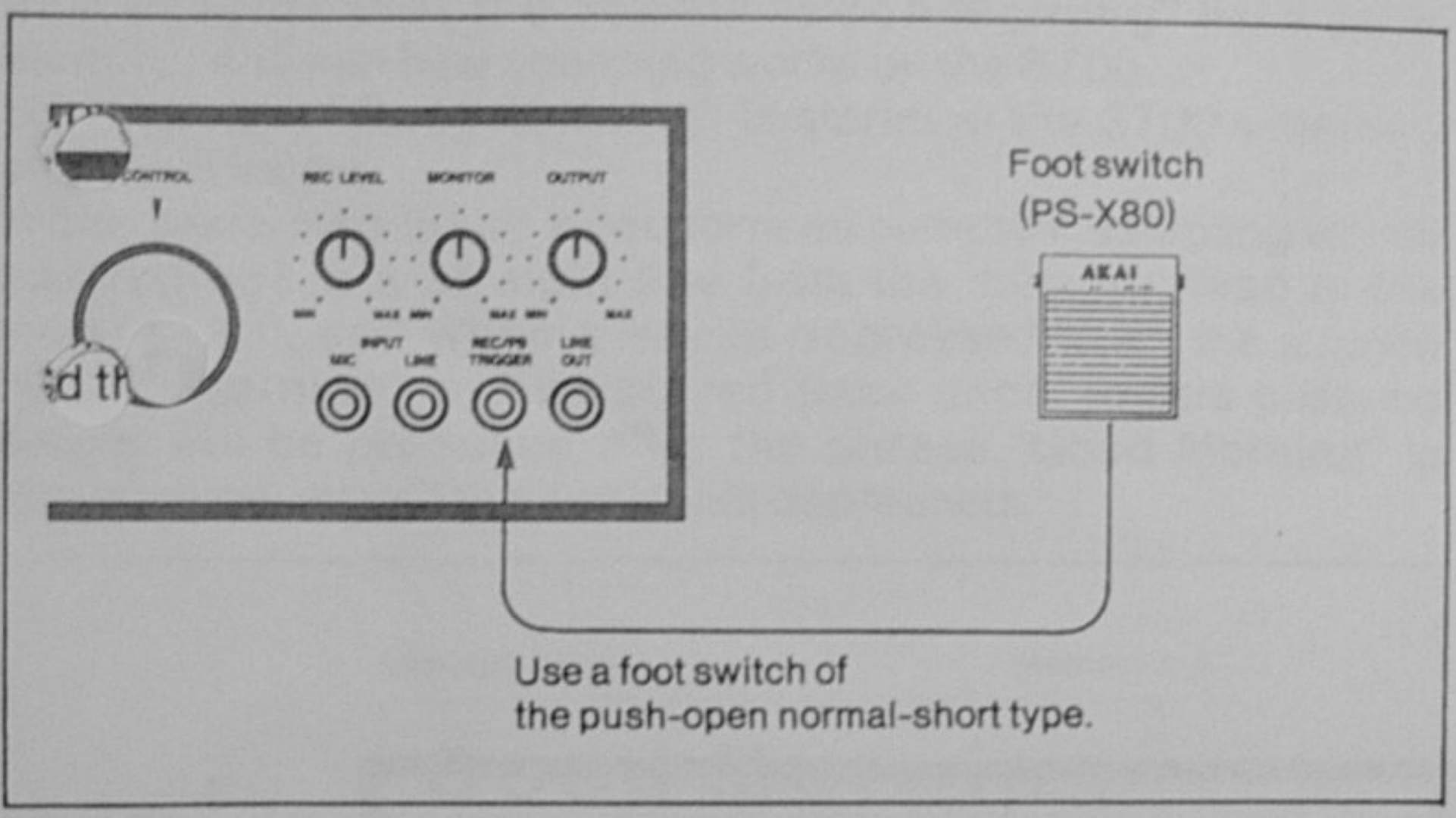
Should the overdubbing be ruined due to some problem with the input source, everything must be repeated from the beginning. Thus, when overdubbing several times, it's a good idea to save the results after each time on the sampler disk.
Also, after one overdubbing is performed, it is no longer possible to play back the initially sampled sound or any of the overdubbed sounds alone, so we recommend you save the initial sound on the sampler disk before beginning overdubbing.

Record Trigger sampling

As previously explained, the S700 is equipped with a built-in automatic trigger function operated by setting the trigger level. However, when a foot switch is connected to the REC/PB TRIGGER jack on the front panel, it is possible to start sampling at any time. Of course, this can also be used for multiple point sampling or overdubbing.

Connection of Foot Switch

Connect a foot switch such as the AKAI PS-X80 to the REC/PB TRIGGER jack.



For sampling, use exactly the same procedure as for basic sampling, multiple point sampling, or overdubbing. Once preparations for sampling are completed, prepare the input source, then press the foot switch to start sampling (or over dubbing).

Applications of REC/PB Trigger

Using the foot switch for record triggering comes in very handy when you wish to sample only sections of the sounds of orchestras, choruses, or instruments off records, CDs, or tapes, or w[illegible] you want to have complete control of the timing to sample nature sounds, noise, or machine sounds.

Starting Playback Using Foot Switch

With the S700, it is also possible to start playback of sampled sounds using the foot switch connected to the REC/PB TRIGGER jack.
To do so, switch the mode as explained in the section on **audio trigger playback (Page 31)** and set the pitch.
Orchestra hits or sound effects can be played back with great timing using the foot switch.

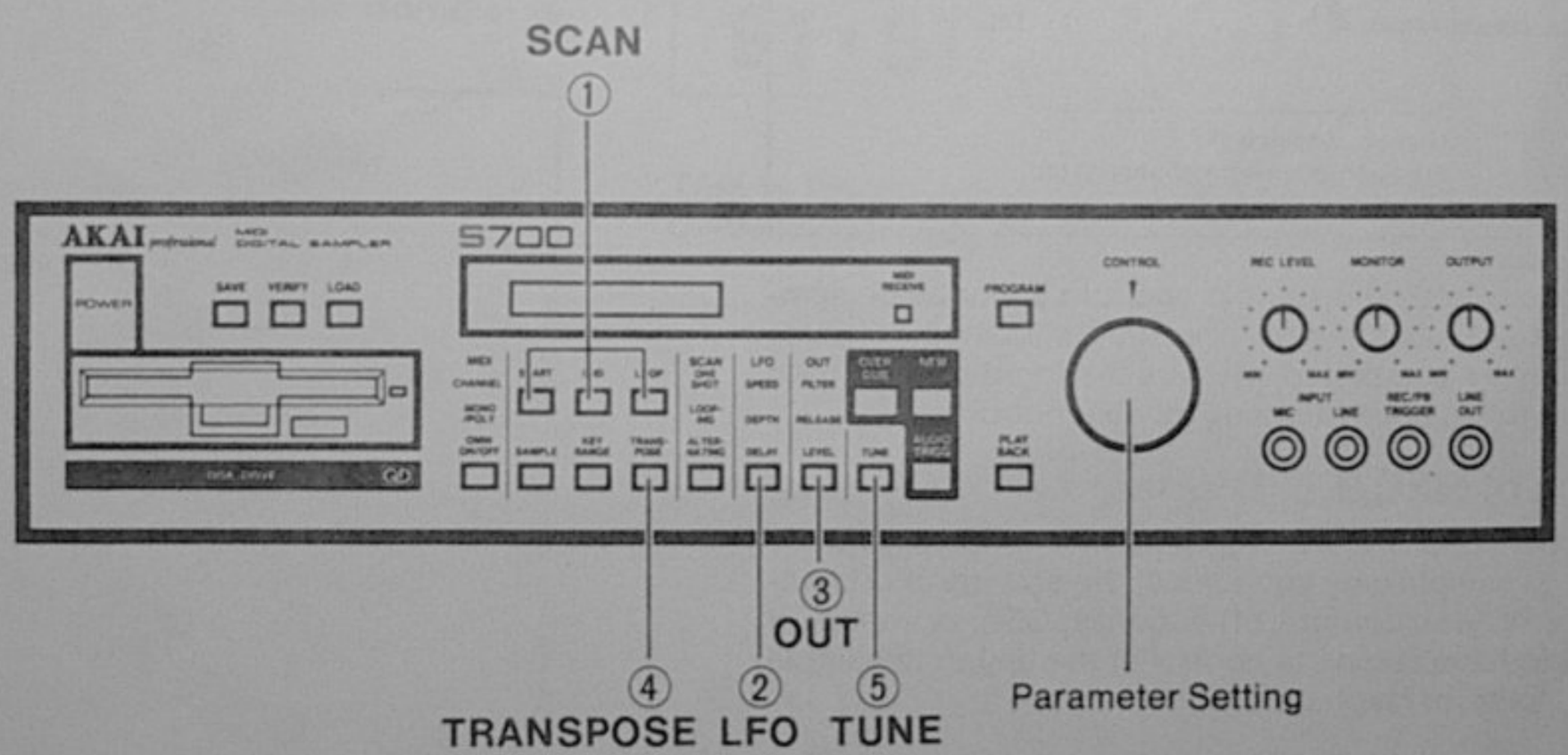
13
Editing

S700 Editing Functions

The S700 is equipped with a variety of editing functions to permit more effective musical expression of sampled sounds. The S700 editing functions include the following:

- Scanning
- LFO
- Output
- Transposing
- Tuning

These functions are designed for easy operation using separate modes for each, select buttons, and messages on the LCD.



① **Scanning**
This has the function of determining how playback is to be performed, and the unnecessary portion of the sample before the desired start point and after the end point can be cut, loops can be created, and playback can be reversed.

② **LFO**
Vibrato can be applied to the sampled sound.

③ **Output**
The release time (attenuation/reverberation) of the low-pass filter can be controlled to make the sound mellower, the volume can be determined, and the amount of filter effect can be determined according to the key velocity.

④ **Transposing**
The pitch of the sampled sound can be set and transposed in halfnote steps. Also, the data for the set pitch can be compressed by 1/2 or increased by one octave.

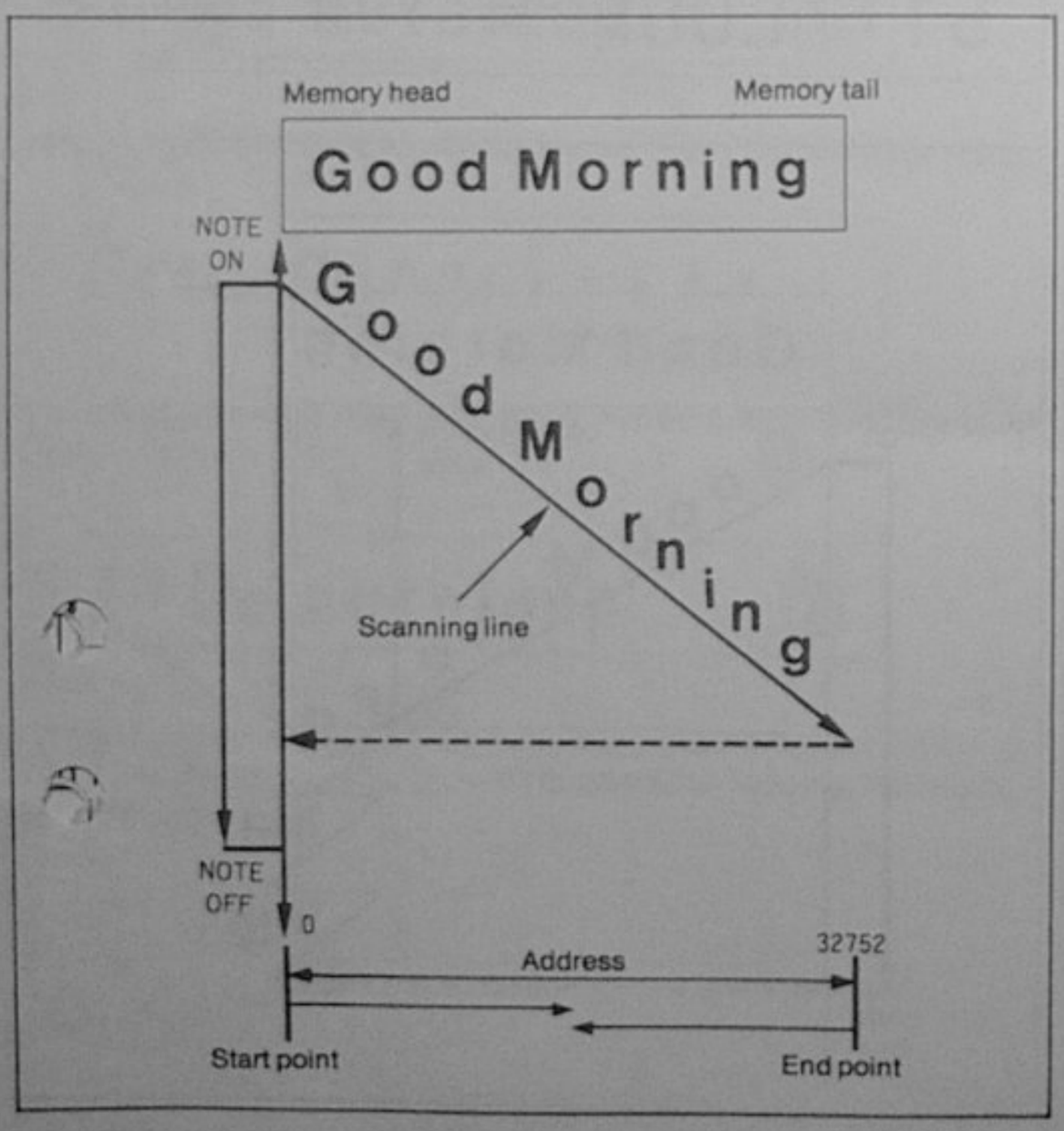
⑤ **Tuning**
The sampled sound can be tuned by ±100 cents.

As the parameters edited using these functions can be stored on sampler disks with the sample data, reproducibility is excellent, and re-editing is possible after loading the data into the S700.

NOTE: The volume of the OUT PUT level control cannot be programmed.

Scanning

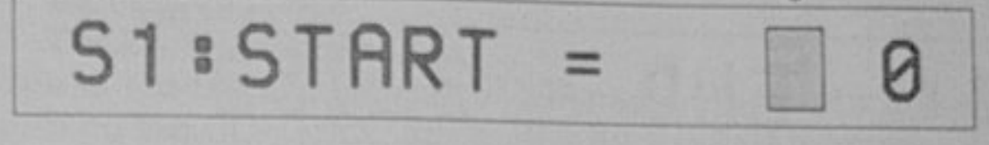
With the S700, sampled sound is stored in the memory in the form of digital data, and the pitch is produced by changing the speed at which the data is read from the memory. This is the same principle as for a tape recorder—increasing or decreasing the playback speed changes the pitch. With the S700, however, because data is stored in the memory, read-out can be controlled by computer in a variety of ways. For example, the points at which read-out starts and ends can be specified, loops can be made, and reverse playback is also possible.
This function is called "**scanning**".
There are three mode buttons: START, END, and LOOP. Let us now imagine that the sounds "**Good Morning**" have been sampled and see how scanning works on the S700.
Suppose that "**Good Morning**" is stored in the S700's memory as shown below.
When performed in the same form as sampled, sampling will be carried out in a straight line from the memory head to the memory tail, and when a key is depressed (ON), the sounds "**Good Morning**" will be played back once. In this case, no sound will be produced after the phrase "**Good Morning**" is played once, even if the key is still depressed.



Start Point Editing

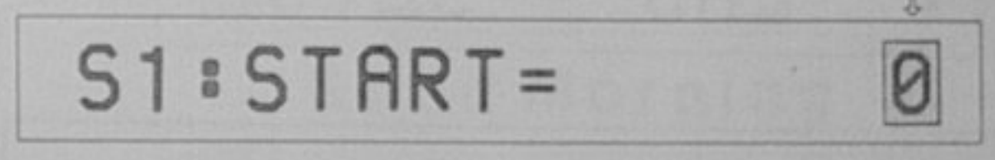
When the START button is pressed, the LCD will switch to the scanning start point edit mode.

Rough adjustment mode

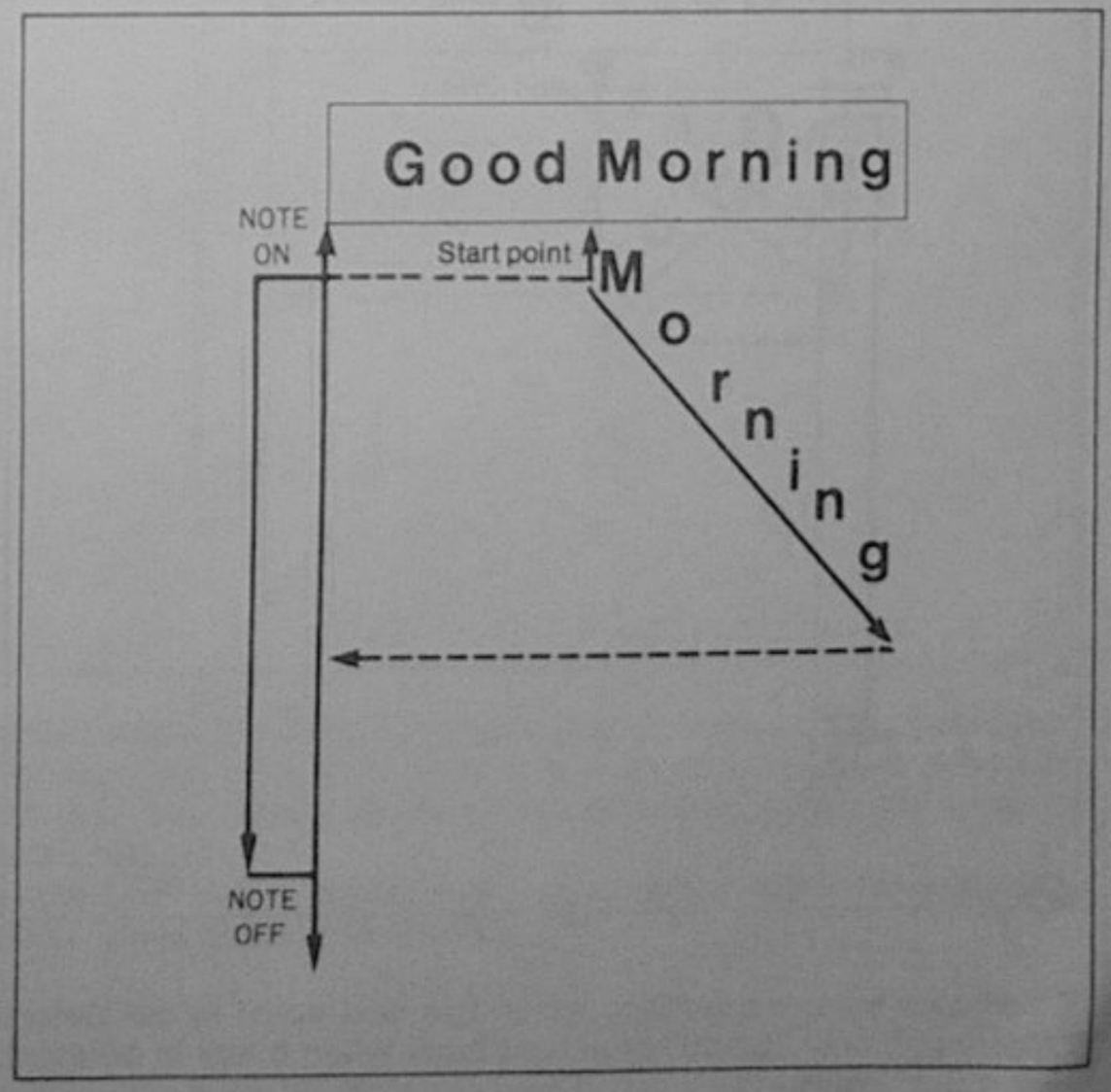


The □ mark flashes at the third digit place. This is the start point (position for playback of memory) rough adjustment mode. Addresses of 100 and above can be set by turning the CONTROL knob.
When the START button is pressed again, the □ mark flashes at the 1st digit place.

Fine adjustment mode



This is the start point fine adjustment mode. Addresses from 0—99 can now be set by turning the CONTROL knob.

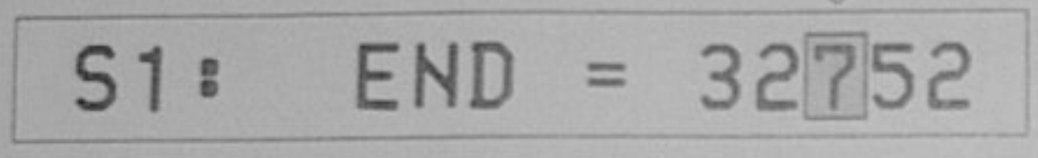


As shown by the diagram, when the start point is set to the beginning of "**M**", "**Morning**" is played back when a key is pressed.
By adjusting the start point in this way, it is possible to start playback at the necessary portion.

End Point Editing

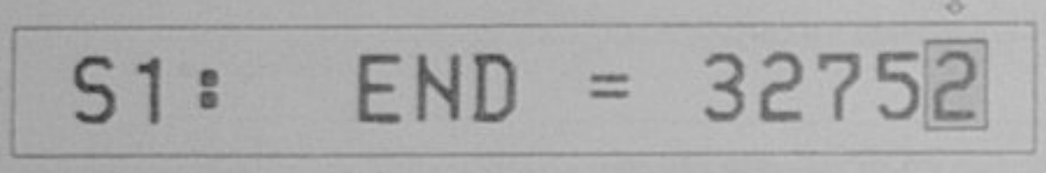
When the END button is pressed, the LCD will switch to the scanning end point edit mode.

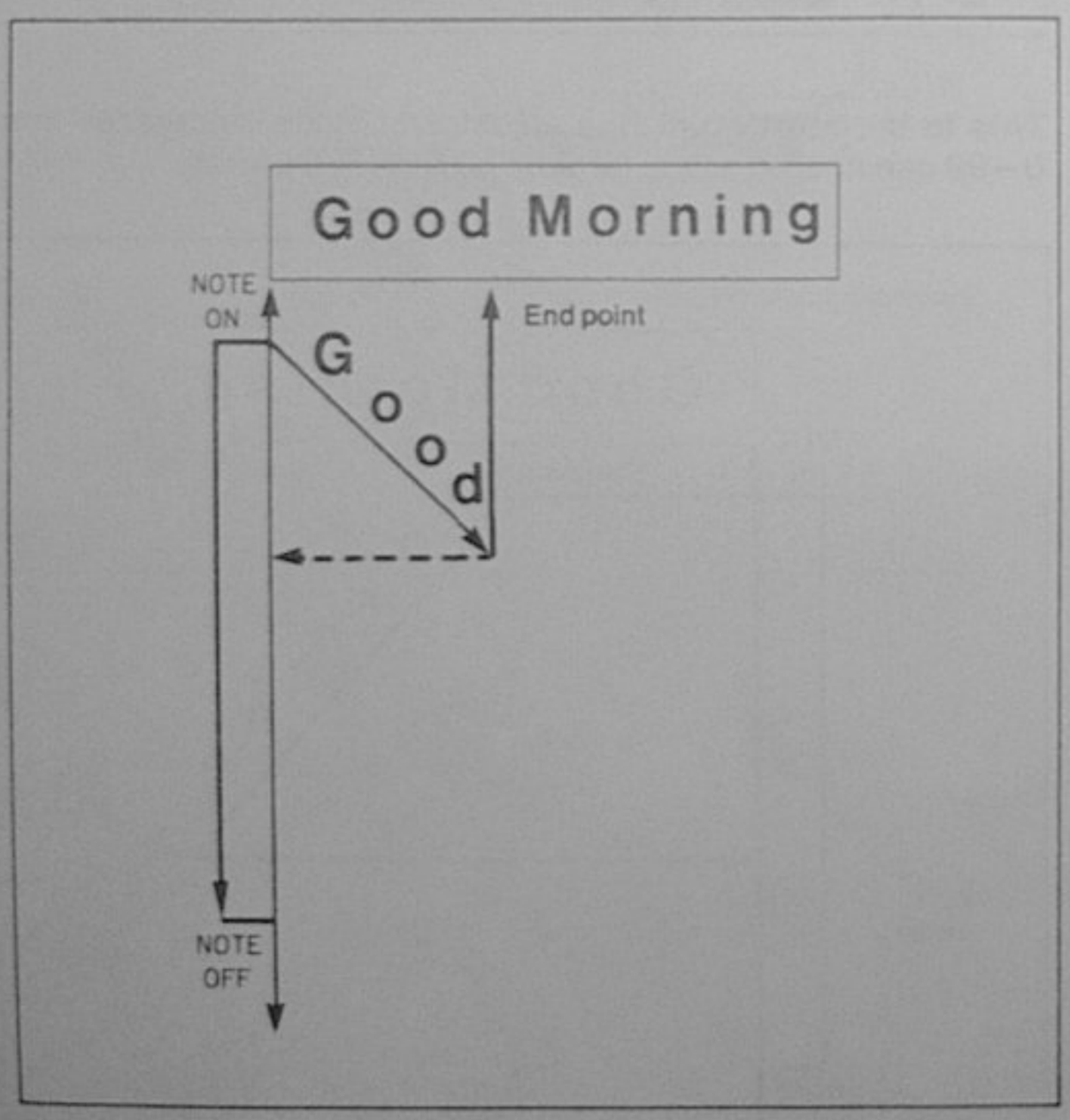
Rough adjustment mode



As for the start point adjustment, the □ mark flashes at the third digit place for the end point rough adjustment mode or at the 1st digit place for the fine adjustment mode.

Fine adjustment mode



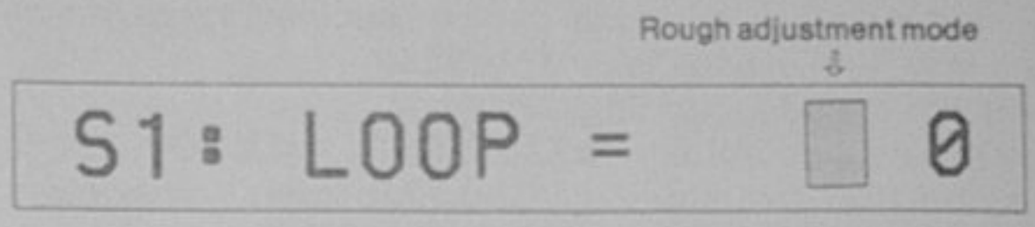


As shown by the diagram, when the end point is set before "**Morning**", only "**Good**" is played back when a key is pressed, "**Morning**" being cut.

Looping Editing

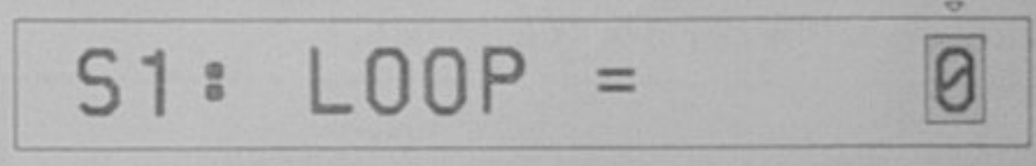
Looping refers to the function in which the sampled sound is played back repeatedly while a key is pressed, and can be used for example to obtain continuous string, brass, or chorus sounds.
When the LOOP button is pressed, the LCD will switch to the looping splice point edit mode.

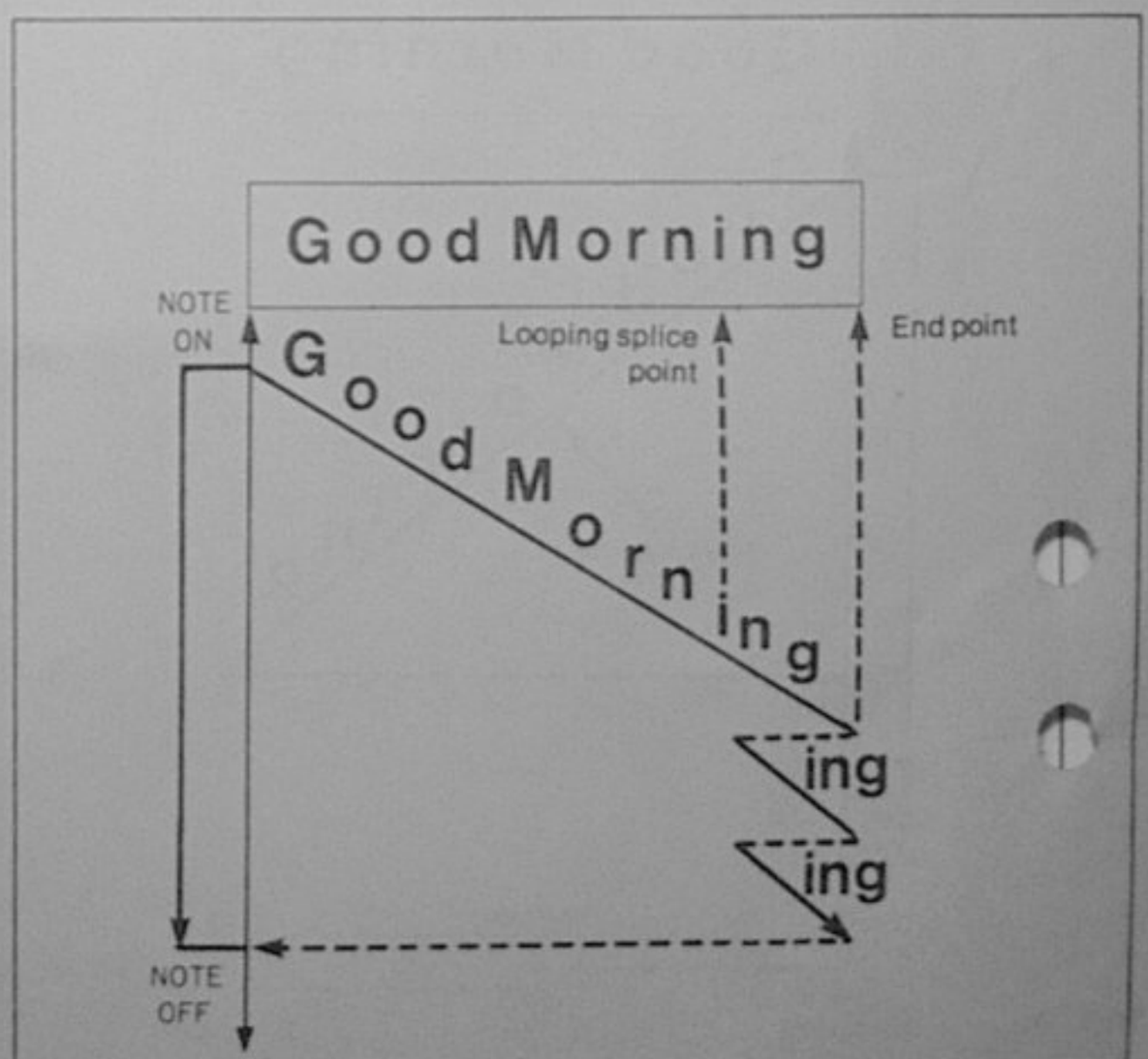
Rough adjustment mode



The □ mark flashes at the third digit place for the rough adjustment mode or at the 1st digit place for the fine adjustment mode.

Fine adjustment mode



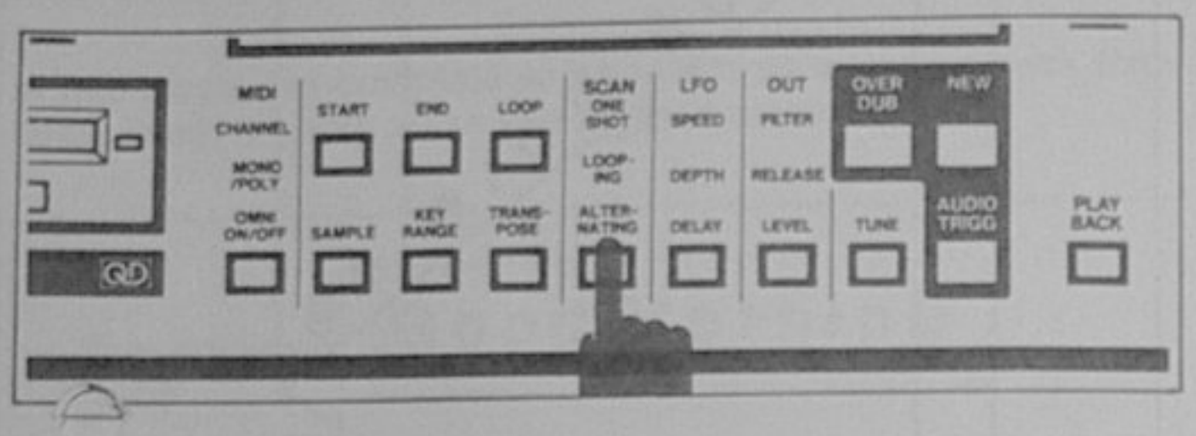


When the looping slice point is set as shown in the diagram, the portion between the looping slice point and the end point will be played back repeatedly.
When a key is turned on, "**Good Morning**" is played back, and if the key is held depressed, a continuous "**ing**" sound will be heard until key-off.

NOTE: As is true for this case, it sometimes happens that the splicing point is hard to set or noise (splicing noise) is produced when using non-musical sounds (spoken words, nature sounds, etc.) or sounds with excessive variations. This does not mean the unit is out of order.

Automatic Splicing System

The S700 is equipped with a function for setting the optimum looping splice point by computer. This is called the "Automatic Splicing System".
Using this function makes it possible to find the desired splicing point immediately and automatically, something which is often difficult manually.



This function can be called out by pressing the SCAN button. Hold the SCAN button depressed until the LCD reads:

```
S1:Do autoloop
```

Now turn the CONTROL knob clockwise. The LCD will now read:

```
Crunching.....
```

Automatic splicing is now performed. When completed, the LCD will return to:

```
S1:Do autoloop
```

With this automatic splicing function, the optimum value is found near the end point, providing powerful looping for instrumental sounds.

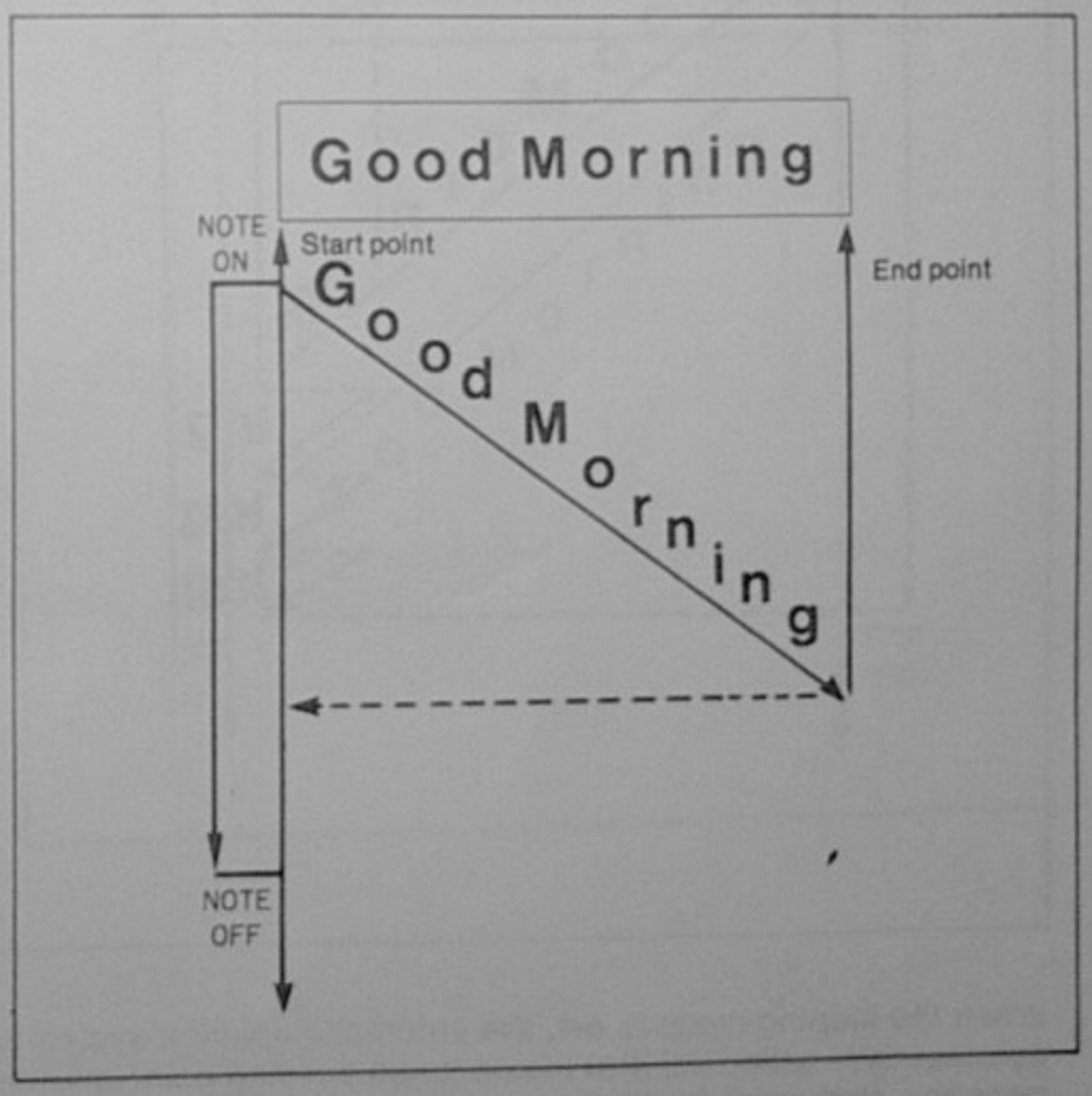
About the Scanning Mode

The S700 is not simply a sampling machine for playing back the sampled sound as such. Using computer technology, it also includes the following four scanning modes to provide greater possibilities for musical expression:

* ONE SHOT
* LOOPING
* ALTERNATING
* DRUM TRIGGER

These modes are called out by pressing the SCAN button and turning the CONTROL knob. PRESS the SCAN button and set to the ONE SHOT mode.

```
S1:SCAN=one shot
```

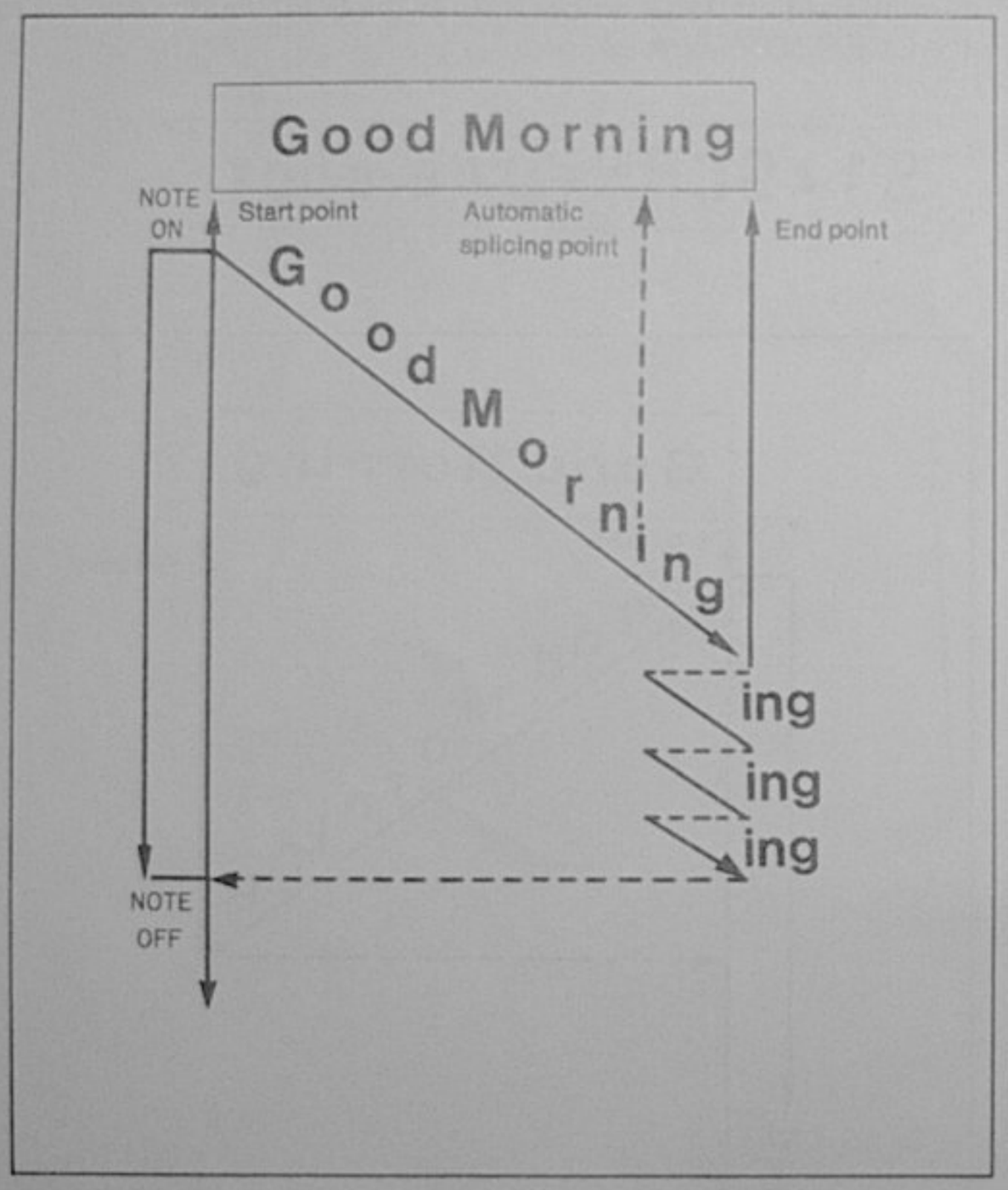


In this mode, the S700 functions as a normal sampling machine. For example, if the start point and end point are set as shown in the diagram, "**Good Morning**" will be played back when a key is turned on.
In the ONE SHOT mode, scanning is performed in the following order. **Start point → End point.**

Now, rotate the control knob clockwise, and the LCD will switch to the looping mode.

```
S1:SCAN=Looping
```

In this mode, it is possible to make loops in the scanning mode and produce continuous sampled sound.

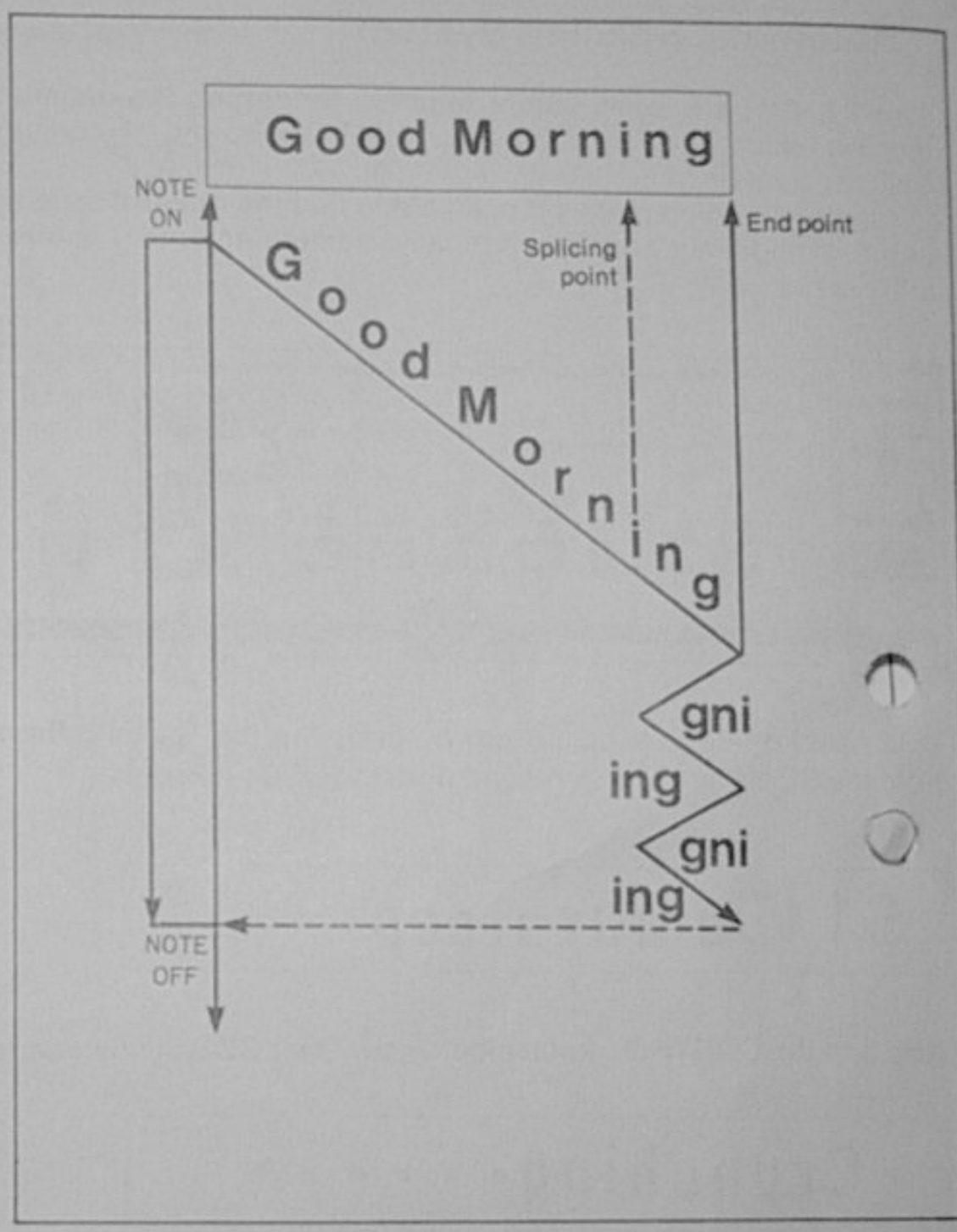


When the looping mode is set, the automatic splicing system is automatically called out and the optimum splicing point is found near the end point to produce continuous sound. The looping mode is perfect for playing strings, brass, or a chorus.

If the CONTROL knob is turned clockwise further, the LCD will switch to the alternating mode.

```
S1:SCAN=Alternat
```

This mode is similar to the looping mode in that loops are produced, but the type of loop is different.



When set as shown in the diagram, the sound "**Good Morning**" is played once, "**gni**" then "**ing**" will be replayed continually between the splicing point and end point until the key is turned off. ed between the splicing point and end point until the key is turned off.

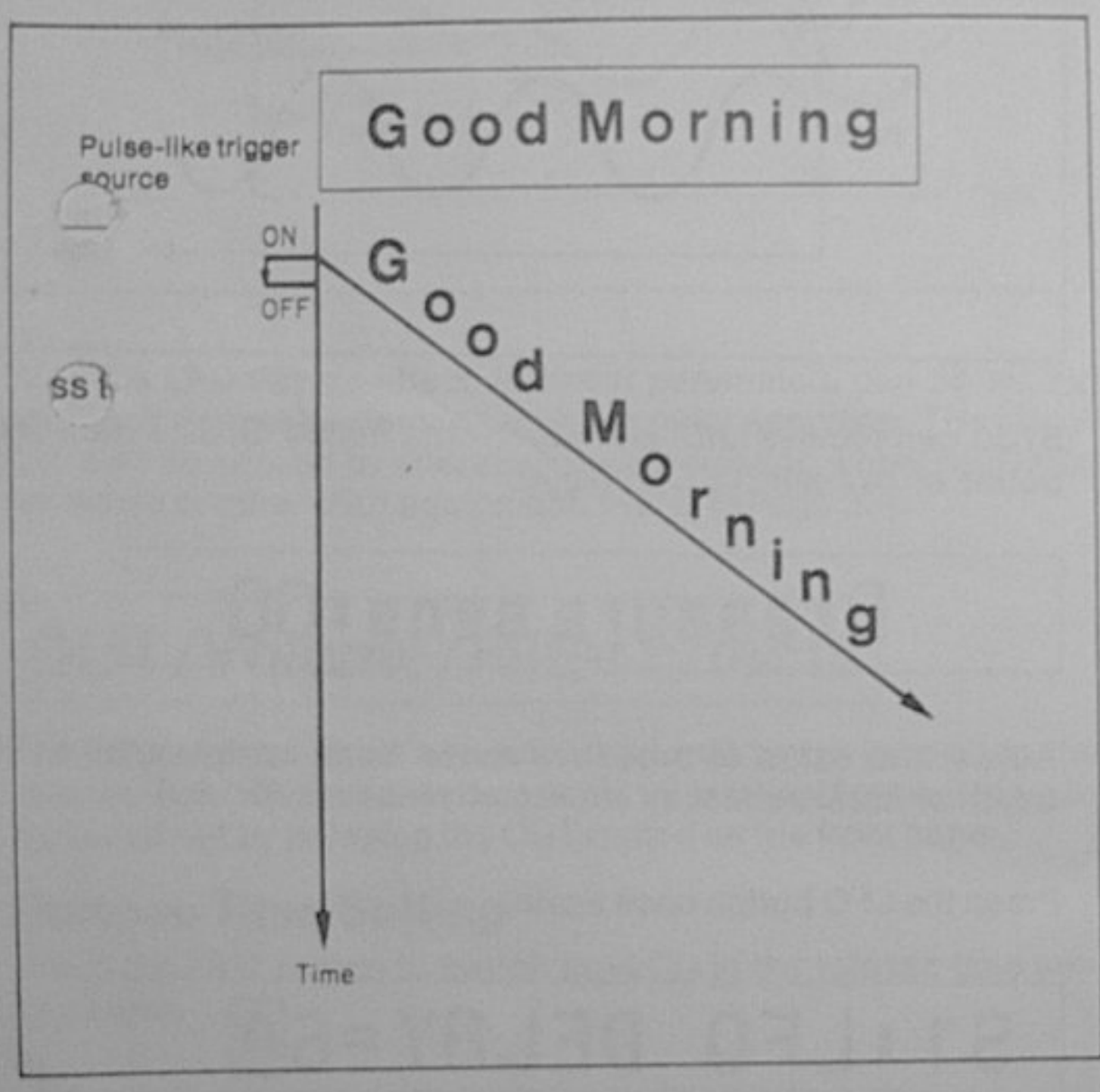
NOTE: The alternating mode is particularly effective for creating continuous string sound, but depending on the sampled sound, the looping mode is sometimes better. Try editing in both the looping mode and alternating mode and select the one which provides the best continuous sound.

Drum Trigger

To use short gate-like trigger sources such as tapping on the mike or rim shot sounds from a rhythm machine or sequencer, press the SCAN button, then turn the CONTROL knob so the LCD reads:

```
S1:SCAN=Drm trig
```

In this mode, the complete sampled sound is played back (one shot), even for short, pulse-like trigger sources.



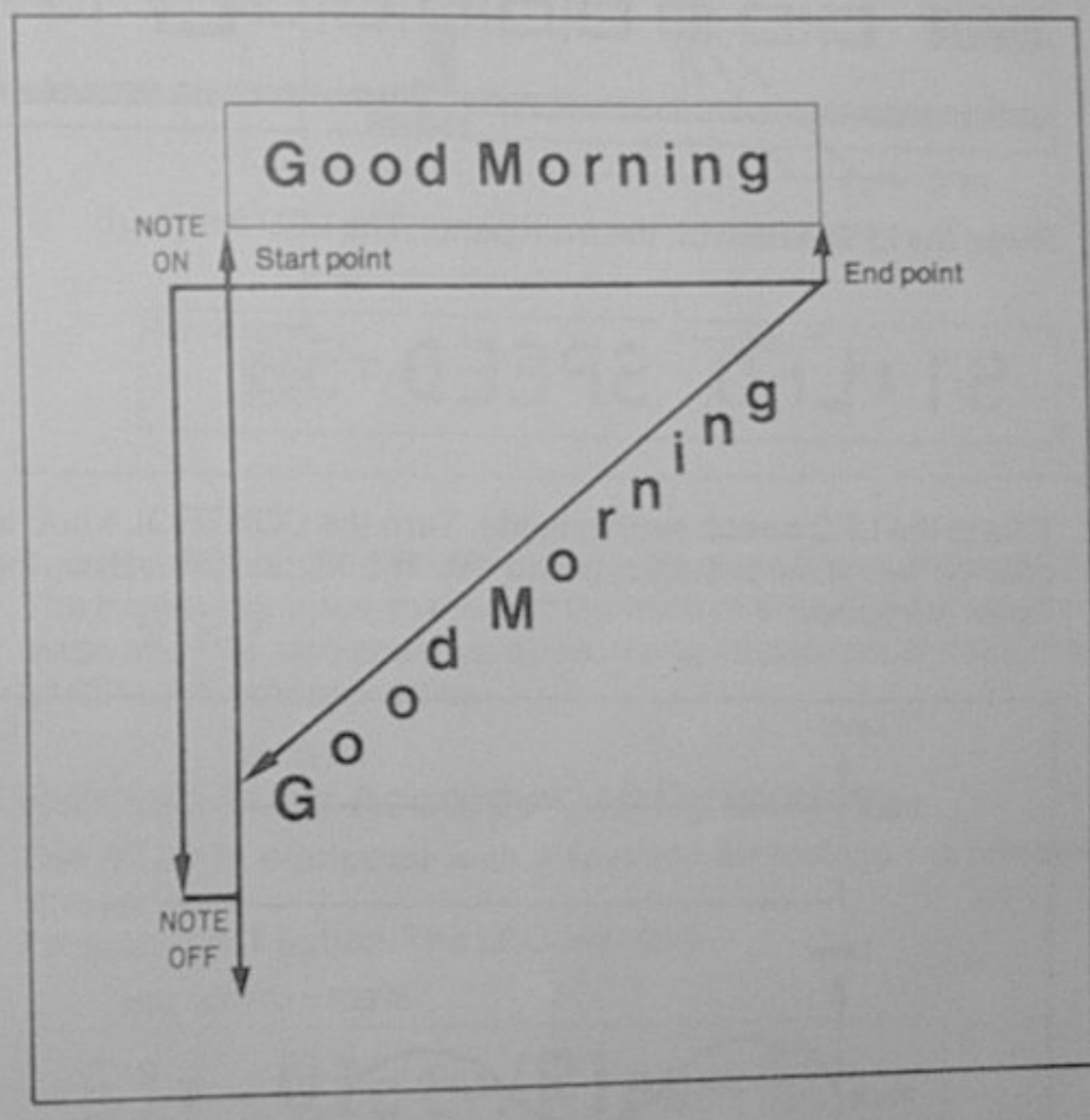
Use this mode for drums, percussion, or sound effects which require precise timing. Of course, this scanning mode can also be used for keyboard performances.

Reverse playback

When the SCAN button is pressed twice, the LCD switches to:

```
S1:Revers/Forwrd
```

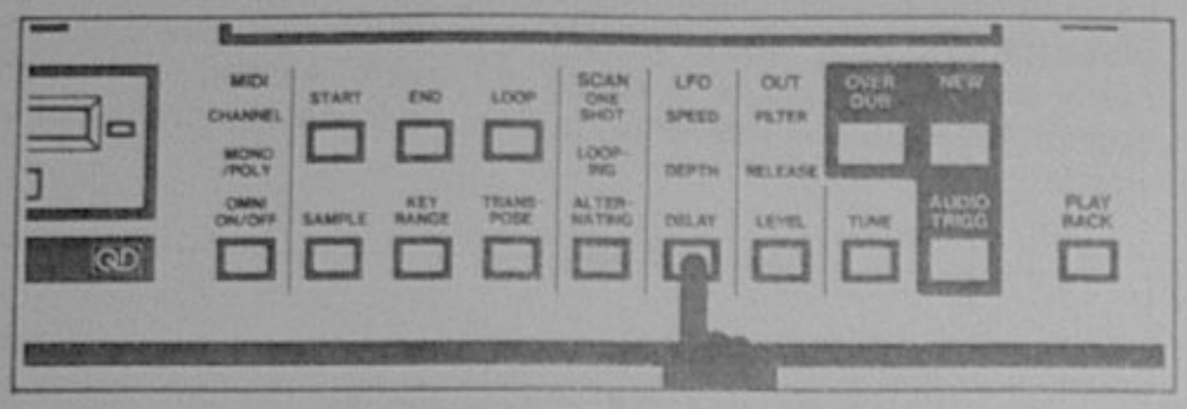
This is the playback mode switching mode. Turn the CONTROL knob to change the position of the □ mark, to "R" for reverse playback and to "F" for forward playback. The □ mark is normally set at "F". When reverse playback is used for human speech for example, the result is a sound like incomprehensible words.



LFO/Vibrato Effect

The S700 is equipped with an LFO (Low Frequency Oscillator), making it possible to apply a vibrato effect to the sampled sound.

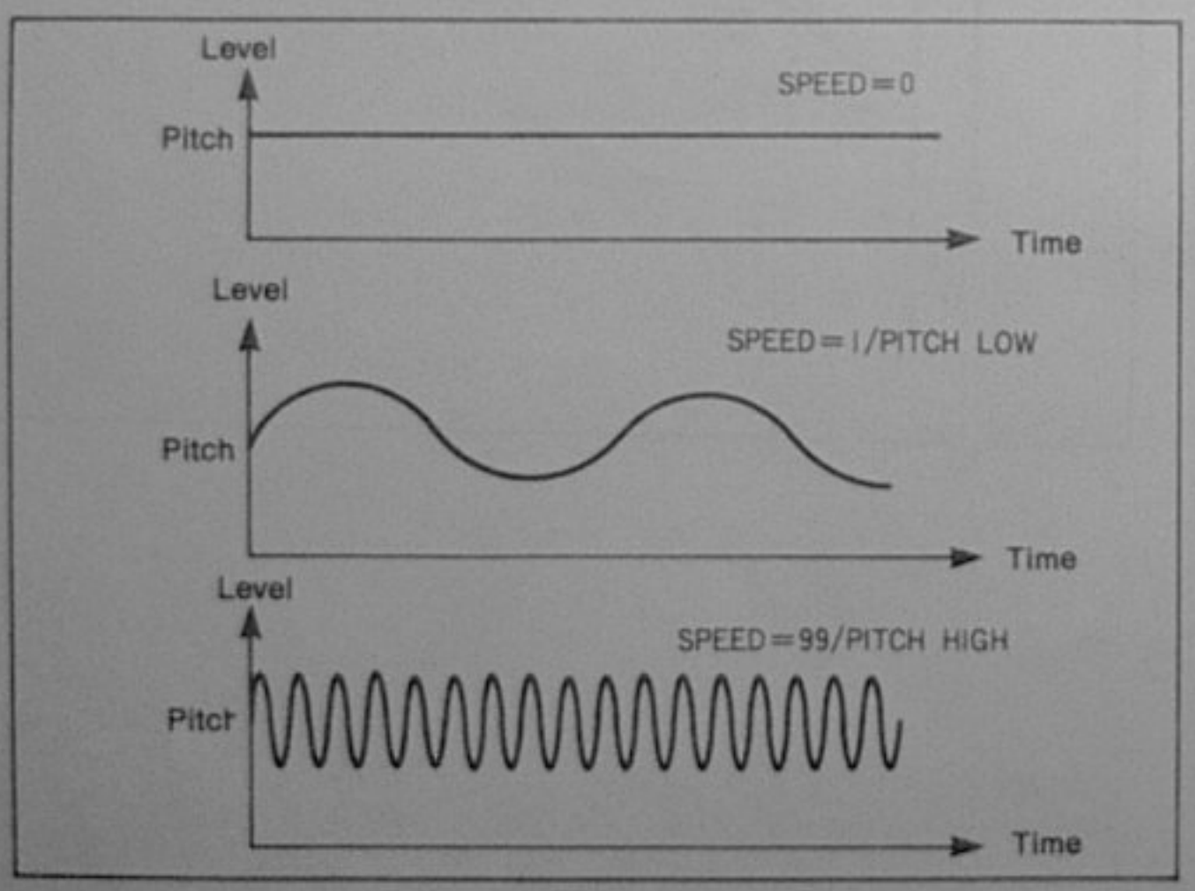
Setting

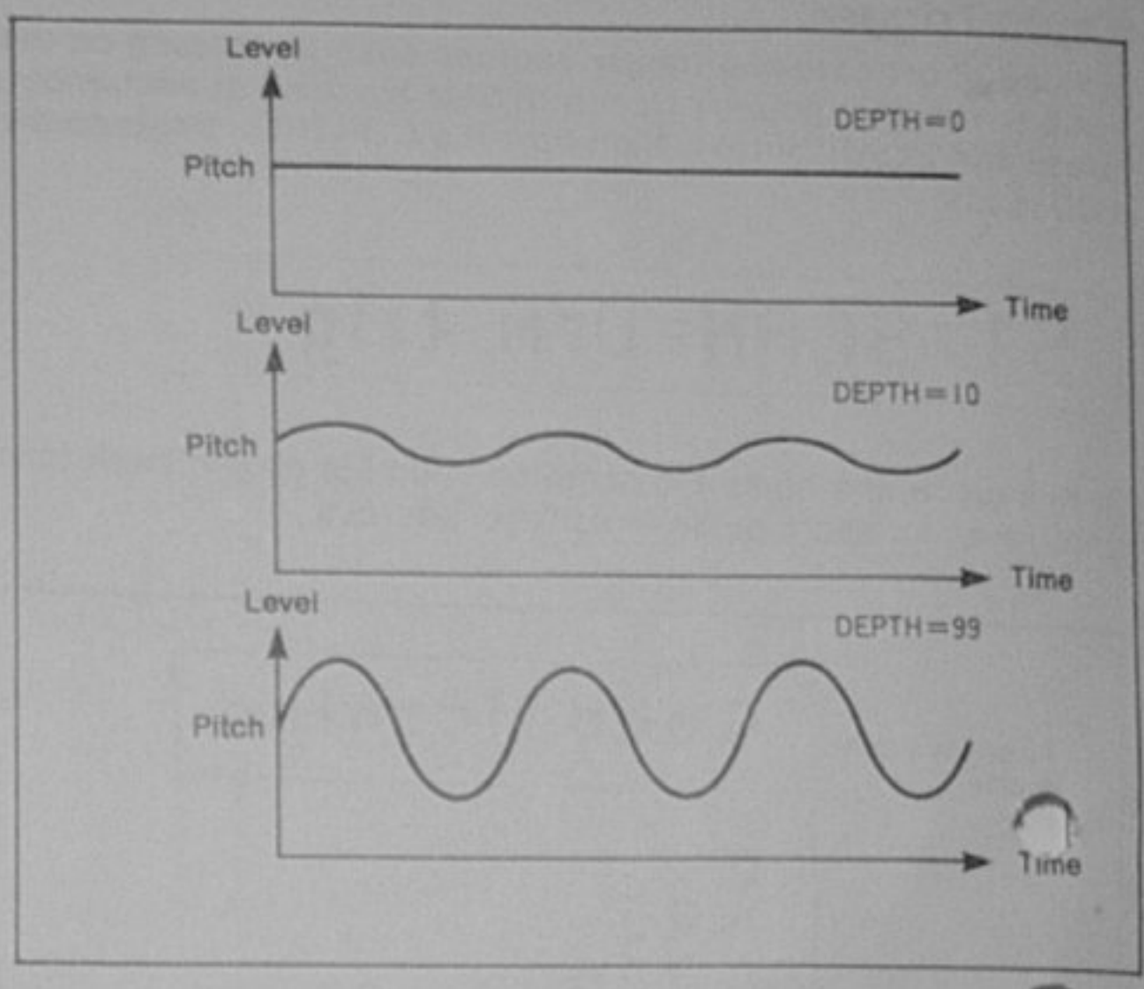


Press the LFO button on the front panel. The LCD will read:

```
S1:LFO SPEED=50
```

This is the LFO speed setting mode. Turn the CONTROL knob to change the value between 0 and 99. The higher the value, the faster the speed.





S700 can receive MIDI aftertouch data from MIDI IN. Press LFO button once again, LCD will read:

```
Pressure sens:00
```

Adjust the value of pressure sense using control knob to se depth of vibrato effect by aftertouch pressure. (0~99)

Press the LFO button once again.

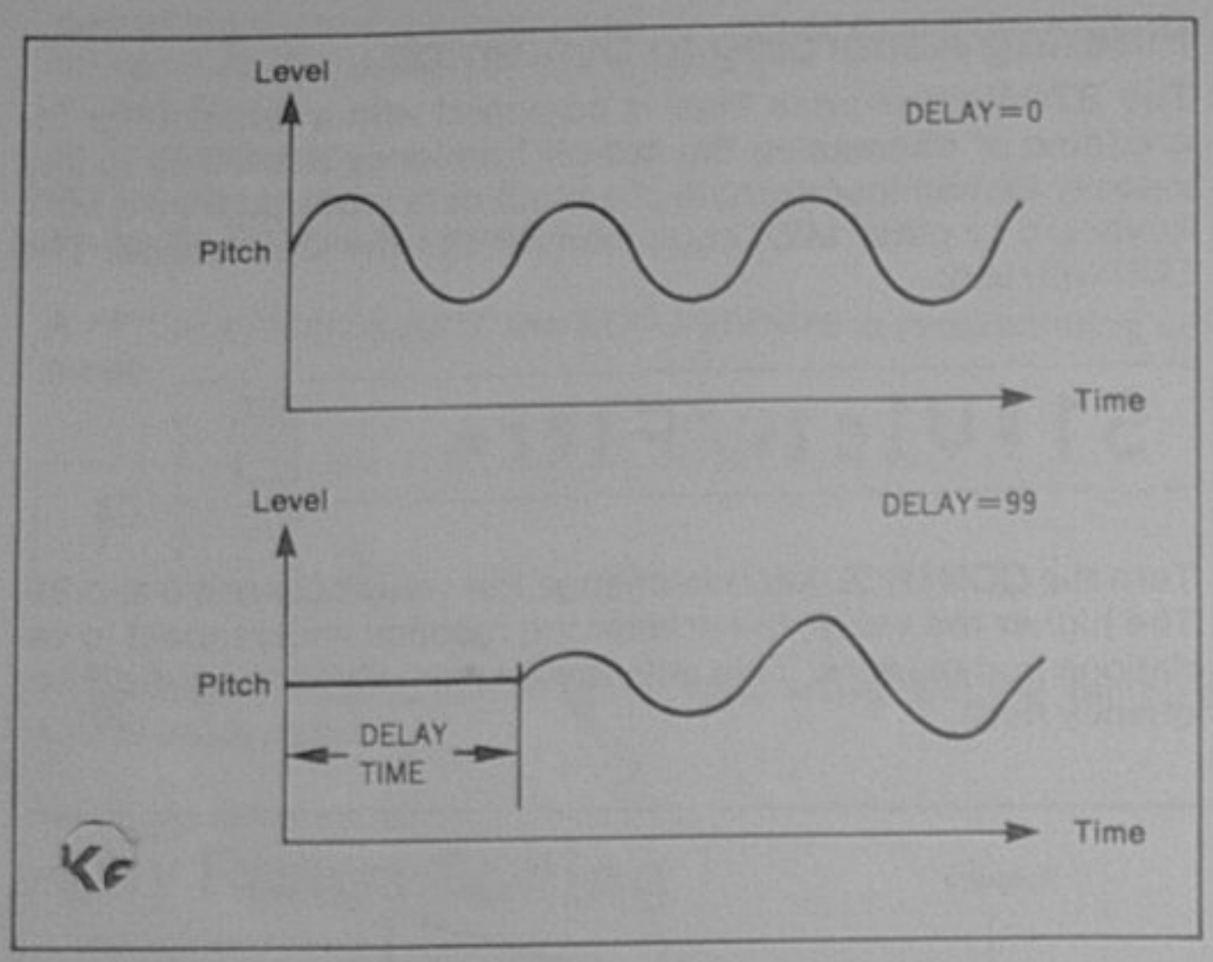
```
S1:LFO DELAY=64
```

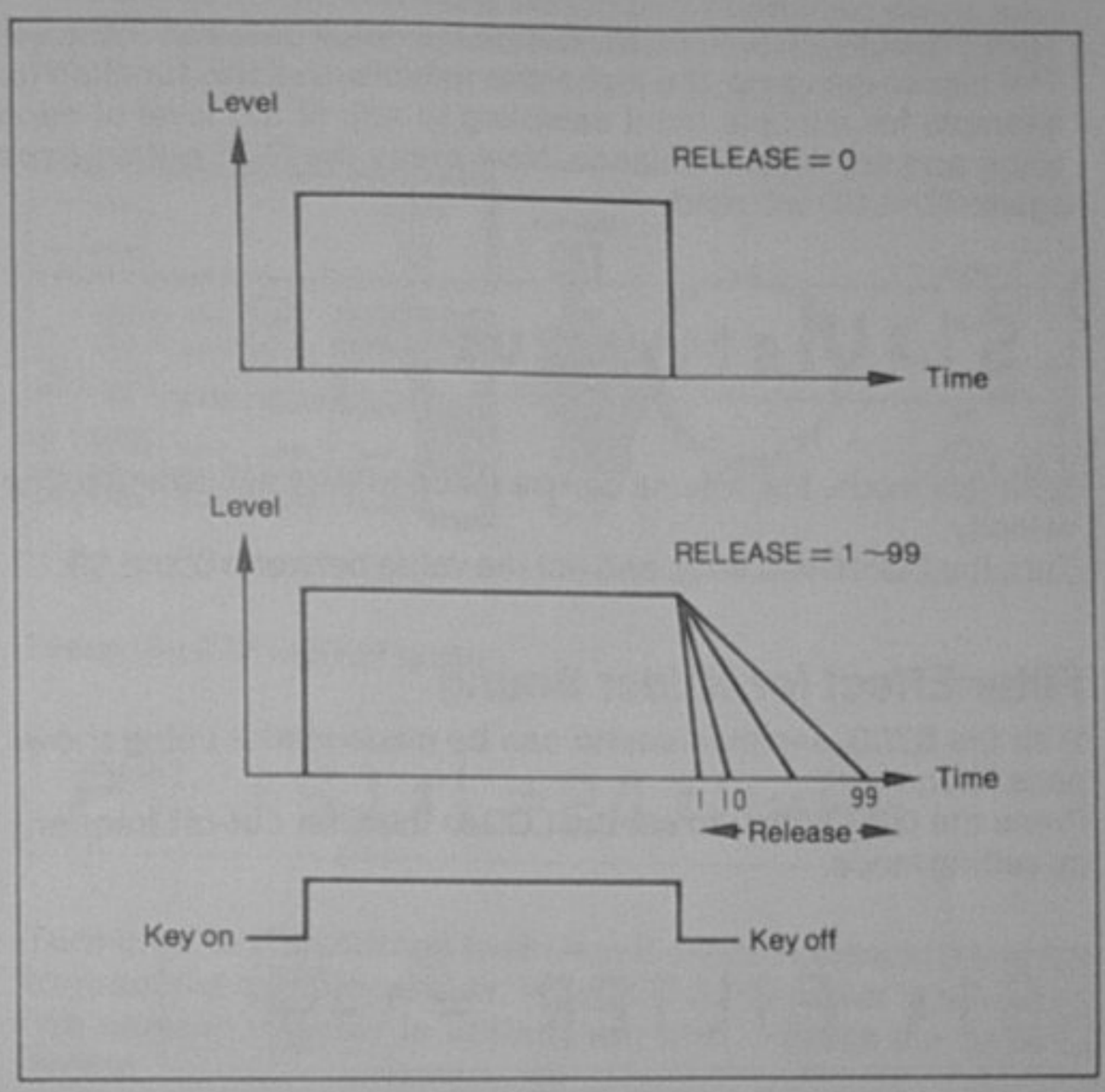
This is the LFO delay time setting mode. Use delay when you want vibrato with a slight lag after the key is turned on. Turn the CONTROL knob to change the value between 0 and 99. The higher the value, the longer the delay.

Now press the LFO button again.

```
S1:LFO DEPTH= 0
```

This is the LFO depth (vibrato strength) setting mode. Turn the CONTROL knob to change the value between 0 and 99. The higher the value, the deeper the vibrato becomes.





Wi[illegible]he LFO vibrato effect, different parameters can be set for eac[illegible] voice when performing multiple point sampling. The effect can also be applied by operating the modulation wheel on a MIDI keyboard or other MIDI equipment. (Refer to Page 33).

OUT/Volume/Filter Effects

The S700 is equipped with an output edit mode for editing the release (attenuation/reverberation), volume, and tone. This can be called out by pressing the OUT button on the front panel.

Release Time Setting

Press the OUT button to switch the LCD to the release time setting mode.

```
S1: RELEASE =30
```

Wh[illegible] release is used, the sampled sound gradually decreases aft[illegible] pr[illegible]e key is turned off. (This is only for looping or alternating sounds).

Turn the CONTROL knob to change the value between 0 and 99. The higher the value, the longer the release time. The sustain/release effect is also possible by receiving sustain pedal data from a MIDI keyboard or the like.

Release Time According to Dynamics

The S700 is equipped with a function for making the release time variable.
Press the OUT button. The LCD will read:

```
S1: Vlcty/Rlse=0
```

Turn the CONTROL Knob to change the value between 0 and 99. The higher the value, the greater is the reaction of the release time.

Volume Setting

Press the OUT button again to set the sampled sound level (volume) setting mode.

```
S1: LEVEL =
```

Turn the CONTROL knob to change the value between 0 and 99. The higher the value, the higher the volume. Use this function for example for multiple point sampling to adjust the level of each voice and set a good balance. Now press the OUT button once again. The LCD will read:

```
S1:Vlcty/levl =
```

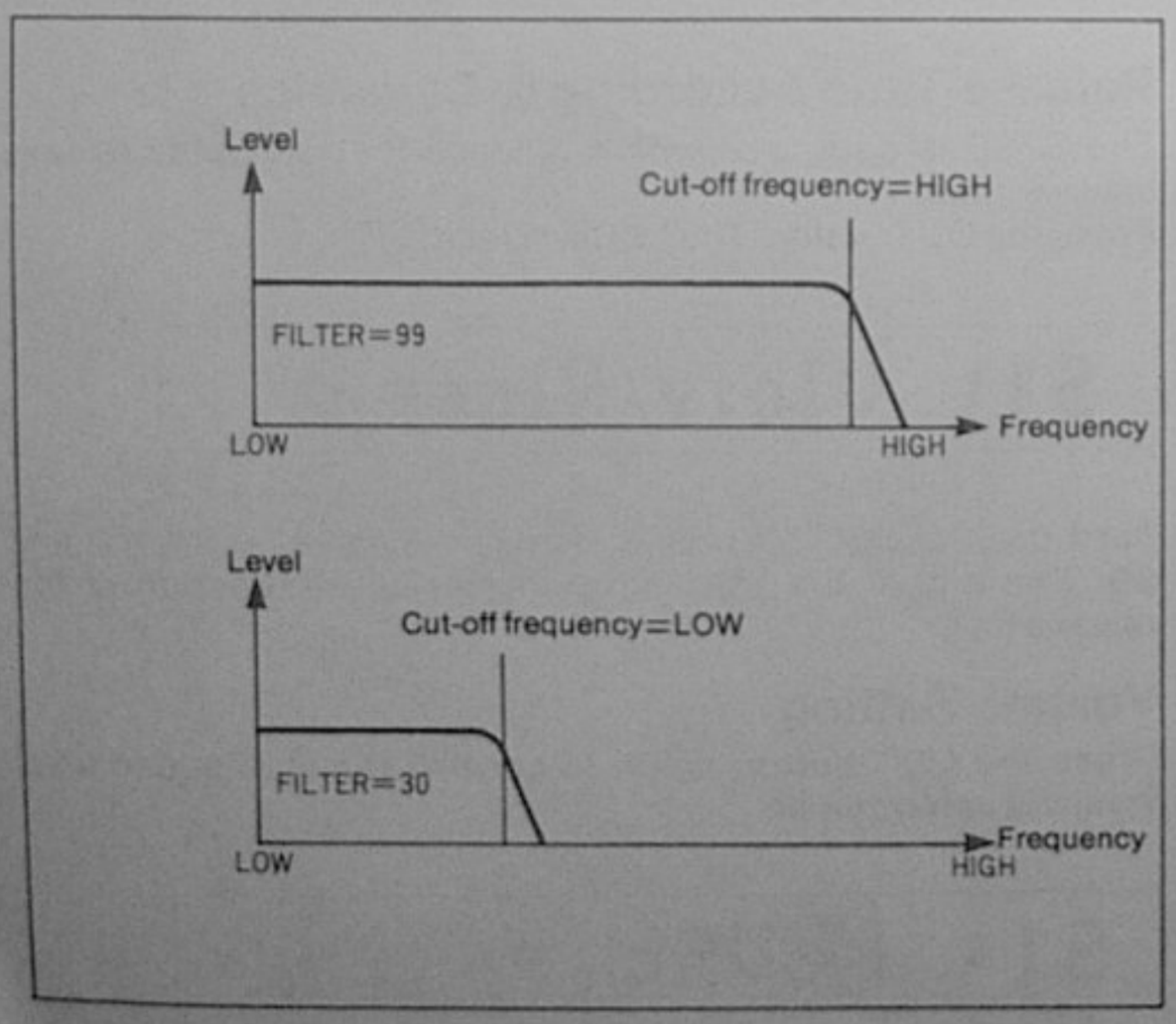
With this mode, the volume can be made to vary according to the velocity.
Turn the CONTROL knob and set the value between 0 and 99.

Filter Effect for Milder Sound

With the S700, sampled sound can be made milder using a low-pass filter.
Press the OUT button to set the LCD to the filter cut-off frequency setting mode.

```
S1: FILTER = 99
```

Turn the CONTROL knob to change the value between 0 and 99. The lower the value, the lower the cut-off frequency, and the milder the sound.

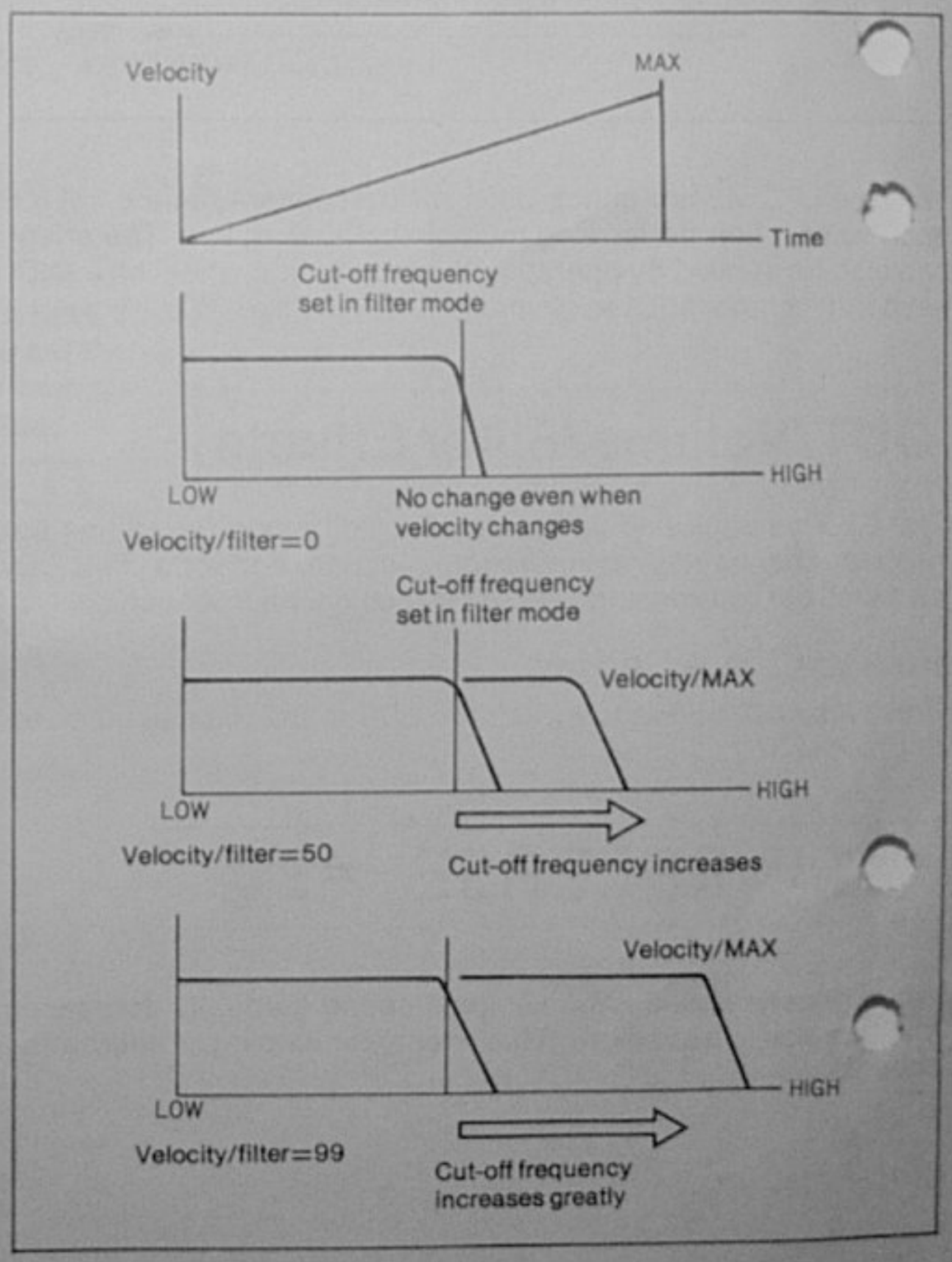


Filtering According to Dynamics

The S700's low-pass filter is equipped with a function for increasing or decreasing the cut-off frequency according to key velocity (dynamics/strength of sound) data received from a MIDI keyboard or other MIDI equipment. Press the OUT button. The LCD will read:

```
S1:Vlcty/Fltr=
```

Turn the CONTROL knob to change the value between 0 and 99. The higher the value, the greater the reaction with respect to variations in dynamics. This sets the amount which the cut-off frequency rises.



When instruments are played loudly, the harmonics can be heard clearly, resulting in a bright sound. This phenomenon can be recreated on the S700 using the velocity/filter setting mode. Use it for piano, strings, brass, or percussion instrument voices. These are the basic ways of editing the sampled sound. Transposing and tuning are explained in the Programming section which follows.

Programming

The S700 is equipped with various programming edit functions, permitting excellent possibilities for use as a multiple point digital sampler. These include the following:

- Key Range
- Transposing
- Tuning
- Audio Trigger Playback

A "P" at the left side of the LCD indicates a programming edit mode.

```
P1  :
```

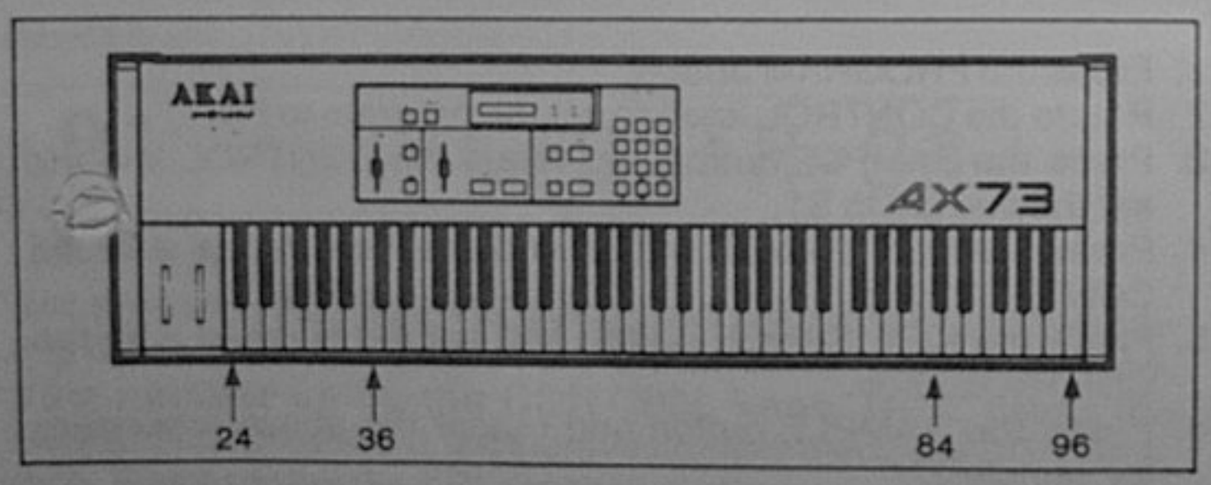
The program data is stored on the disc along with the sampled sound voice data.

Key Range Setting

Press the KEY RANGE button.

```
P1  :S1:L24:H=99
```

This is the low key setting mode for key range setting. Turn the CONTROL knob to change the value between 0 and 127. These values correspond to MIDI note numbers. The value of 24 is the lowest note on a 73-key C-scale MIDI keyboard.

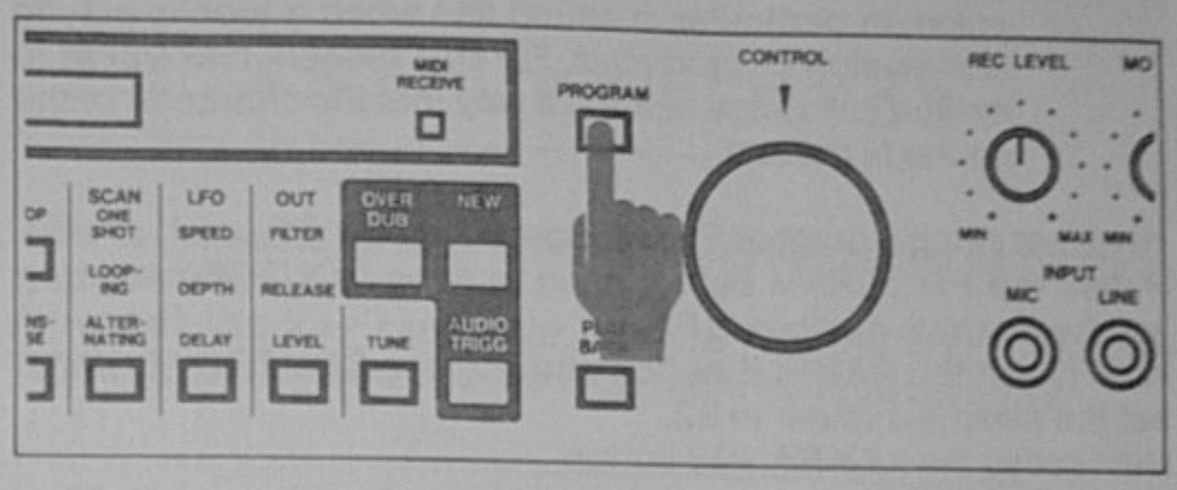


Now press the KEY RANGE button again.

```
P1  :S1:L=24:H=96
```

This is the high key setting mode for key range setting. Turn the CONTROL knob to change the value between 0 and 127. The value of 96 is the highest note on a 73-key (or 61-key) C-scale MIDI keyboard.
For **MIDI note numbers**, refer to Page 34.

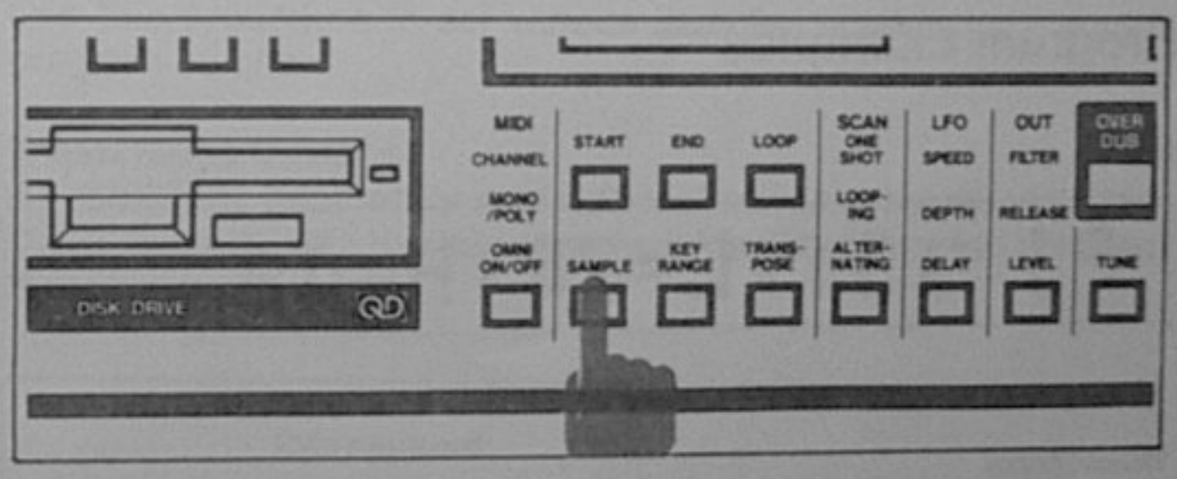
Now press the KEY RANGE button and set the key range setting mode. First set the program number. When the S700 power is turned on, the program number is initially set at P1.



Press the PROGRAM button.

```
P1  :S1:L=24:H=96
```

Turn the CONTROL knob to change the value between 0 and 32. Now set the sample number. When the S700 power is turned on, the sample number is initially set at S1. Press the SAMPLE button.




```
P1  :S1:L=24:H=96
```

Turn the CONTROL knob to change the value between 1 and 6 (or 16 when using options).
Now set the key range. If you wish to use the entire scale for one sampled sound, press the KEY RANGE button, call out the key range setting mode, and set L=36, H=96 for a 61-key C-scale MIDI keyboard or L=24, H=96 for a 73-key C-scale MIDI keyboard.

61-key C-scale keyboard

```
P1  :S1:L=36:H=96
```

73-key C-scale keyboard

```
P1  :S1:L=24:H=96
```

NOTE: Depending on the sampled sound, it sometimes happens that the character of the original sound is lost when played at a pitch one octave or more above the basic pitch, resulting in a strange sound. For the human voice, in particular, a sound like when a tape is played fast or slow is produced. For this reason, make sure to set the key range in such a way that the character of the sound is not lost.

Next, set sample number S2 to program number P2.
Press the PROGRAM button, then use the CONTROL knob to set the program number to P2.
Now press the SAMPLE button and use the CONTROL knob to set the sample number to S2.
Next press the KEY RANGE button.

```
P2  :S2:L=24:H=96
```

Set the key range.
Use this procedure to set up to a maximum of 32 programs.
Use this to set one voice for each program number then recall and playback in order a maximum of 6 different voices (or 16 using the ASK70) in rhythm with a song.

Program Examples

Bass

```
P1  :S1:L=24:H=48
```

Mixed Chorus

```
P2  :S2:L=60:H:84
```

Orchestra Hit

```
P3  :S3:L=48:H=72
```

Strings

```
P31:S1:L=53:H=84
```

Sound effect

```
P32:S2:L=84:H=96
```

Key split function

Now try using the key split function to assign various sampled sounds to a single program number.
Using the S700, it is possible to split various sampled sounds onto different areas of the keyboard for a maximum of 6 sounds (16 using the ASK70).

When the S700 is initialized when the power is turned on, the following sine wave test tones are programmed:

```
P1:S1:-:-:-:-:-
P2:S-:2:-:-:-:-
P3:S-:-:3:-:-:-
P4:S-:-:-:4:-:-
P5:S-:-:-:-:5:-
P6:S-:-:-:-:-:6
```

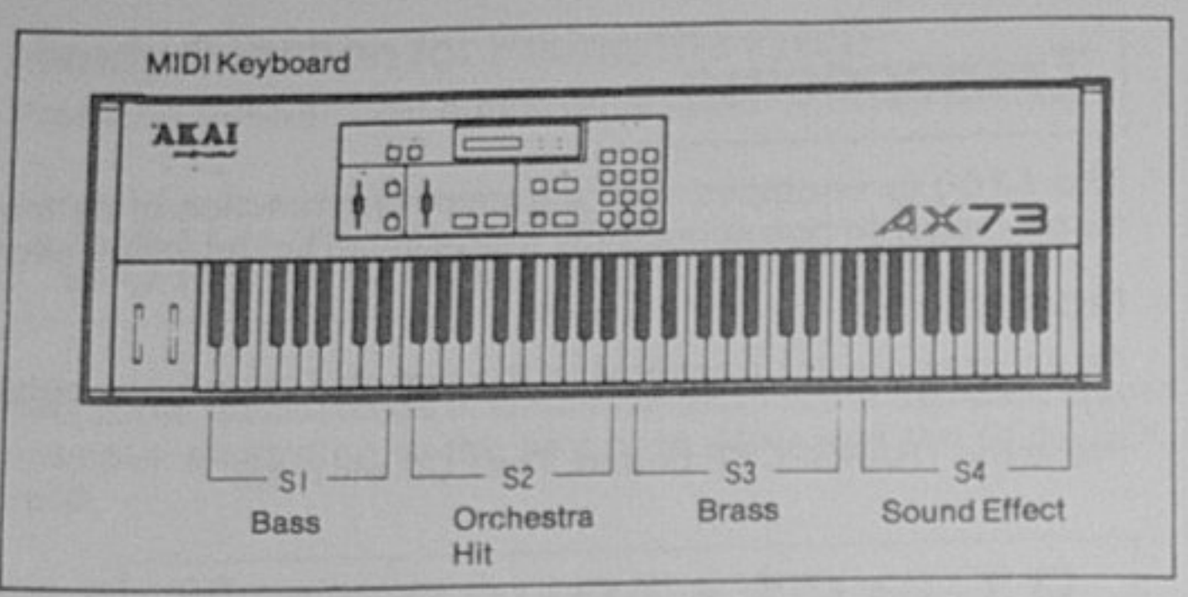
The key range for all of these is L=24, H=99.
The test tones set for each program are cleared when a sampled sound is set for that sample number, but the test tone can be stopped with the key range setting shown below.

```
P3  :S3:L=24:H=0
```

When the ASK70 expansion memory is used, test tones are programmed for each program number up to P16.
Upon programming, if the test tone key ranges are not rewritten, the test tone may be mixed with the sampled sound.

For example if P1/S1 is bass, and P2/S2 is mixed chorus, and you want to combine them at P5 with a key split of bass from L=36 to H=60 and mixed chorus from L=61 to H=96:

1. Press the PROGRAM button.
2. Rotate the CONTROL knob to set the program to P5.
3. Press the SAMPLE button and rotate the CONTROL knob to set the sample to S1.
4. Press the KEY RANGE button and set the L range with the CONTROL knob.
5. Press the KEY RANGE button and set the H range with the CONTROL knob.
6. Press the SAMPLE button and repeat the above procedure for sample 2.
7. Before you can play this new program, you must first remove the test tone from program 5. So press the SAMPLE button and adjust the sample number to S5 with the CONTROL knob. Then press the KEY RANGE button twice and set H to "0".
   Now you are ready to Play.



Bass

P1 :S1:L=24:H=35

Orchestra Hit

P1 :S2:L=36:H=59

Brass

P1 :S3:L=60:H=83

Sound Effect

P1 :S4:L=84:H=96

Now press the KEY RANGE button and set to the key range setting mode. Then press the PROGRAM button and set the program number using the CONTROL knob. Next, press the SAMPLE button and set the sample number using the CONTROL knob. Finally press the KEY RANGE button.

P1 :S1:L=24:H=96

In this example, program number P1 and sample number S1 are used.
Set the key range for sample number S1. For example,

P1 :S1:L=24:H=35

This is the same as setting a single sampled sound for one program number.
Now set the key range for sample number S2. Press the SAMPLE button and use the CONTROL knob to set to S2.

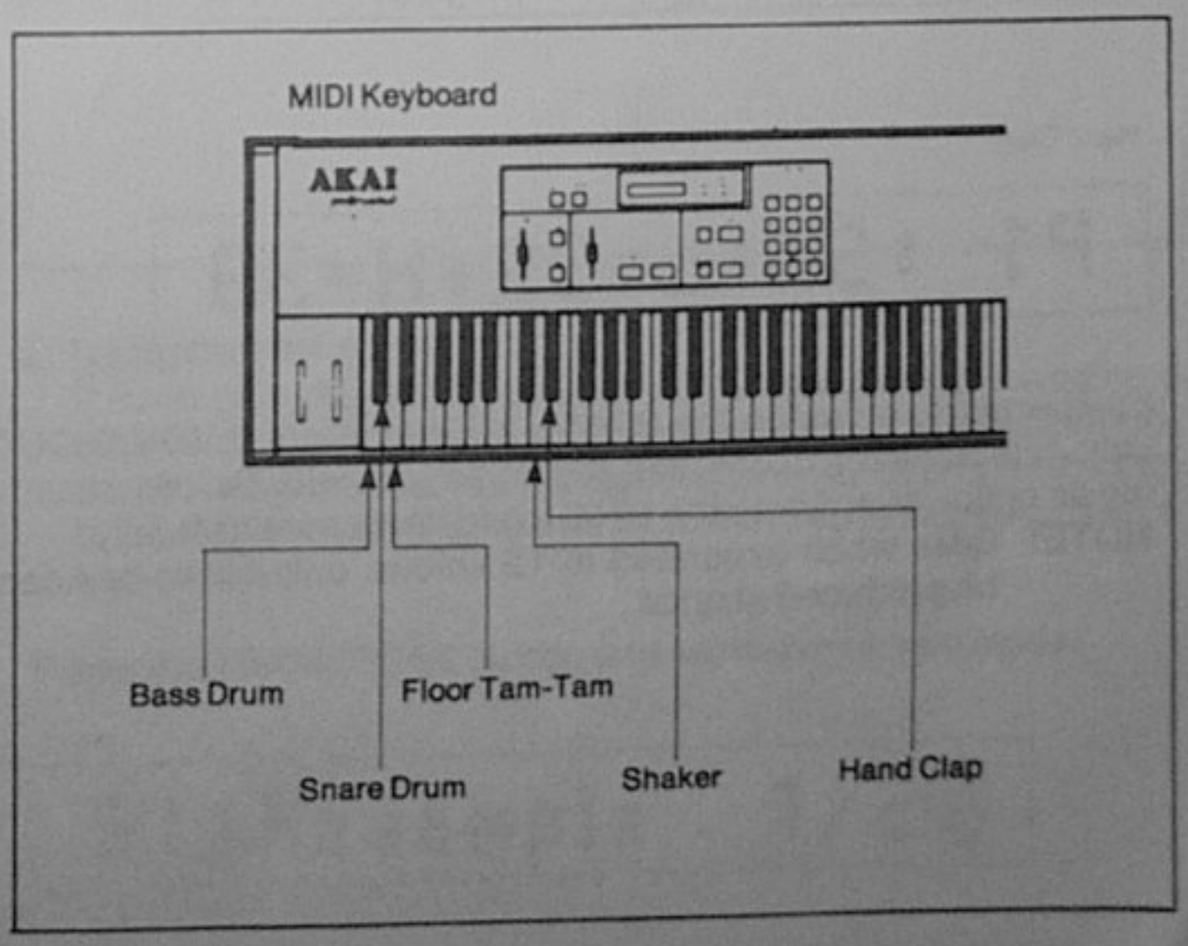
P1 :S2:L=24:H=47

Then press the KEY RANGE button.

P1 :S2:L=36:H=59

Set the key range. For example,
Use this procedure to set various sampled sounds for a single program number.

When Using Options
By mounting separately sold optional memory boards onto the S700, it is possible to store sample voice data for up to 16 voices in the memory.



Use the expanded memory size and programming functions to play a variety of different voices on a single keyboard (drums, percussion, special effects, etc.)
Also, automatic playback is possible using up to 16 voices when a MIDI sequencer is used.

Bass Drum

```
P1 :S1:L=24:H=24
```

Snare Drum

```
P1 :S2:L=25:H=25
```

Floor Tam-Tam

```
P1 :S3:L=27:H=27
```

Shaker

```
P1 :S15:L=38:H=38
```

Hand Clap

```
P1 :S16:L=39:H=39
```

Furthermore, by using the S700's MIDI mode and VOICE OUT jack, it is possible to create a stereo sound field. Before mounting an option board onto the S700, read its manual carefully.
NOTE: Even when expanded to 16 voices, only six voices can be produced at once.

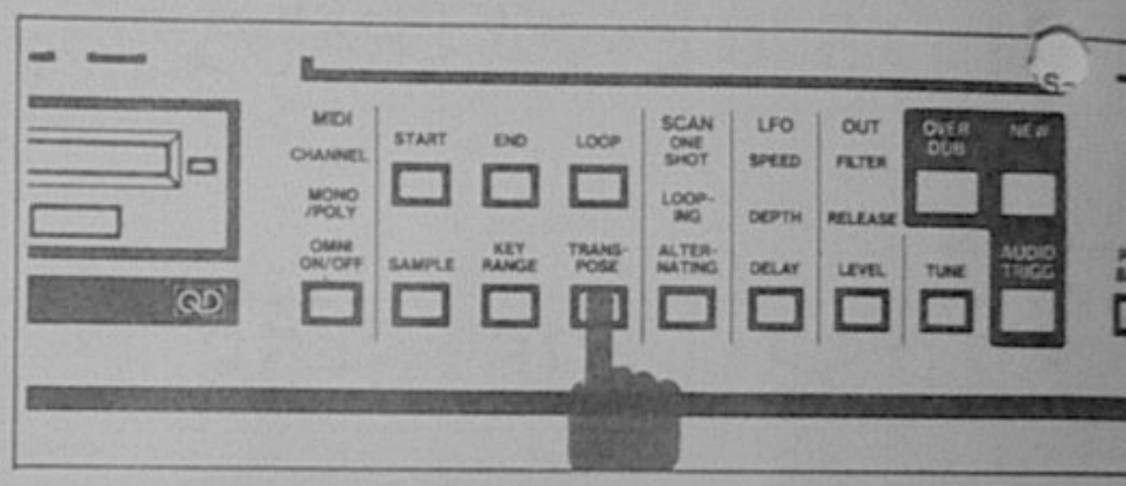
Transposing

The S700 is equipped with a transposing function in halfno steps, making it possible to play the sampled sound at any pitch

Operation

As an example, try transposing the sampled sound one octav up.
Press the TRANSPOSE button. The LCD will read:

```
P1 :S1:TRNSP= + 0
```



Turn the CONTROL knob to change the value between −60 ~ ~ +60. One step corresponds to one halfnote. To transpos one octave up, set the CONTROL knob to:

```
P1 :S1:TRNSP=+12
```

To transpose one octave down, set the CONTROL knob to:

```
P1 :S1:TRNSP=-12
```

It's as simple as that. This data is also stored on the sample disk along with the sampled sound data.
NOTE: Always check the pitch on the keyboard when trans posing.

Handy Function for Fixing the Pitch

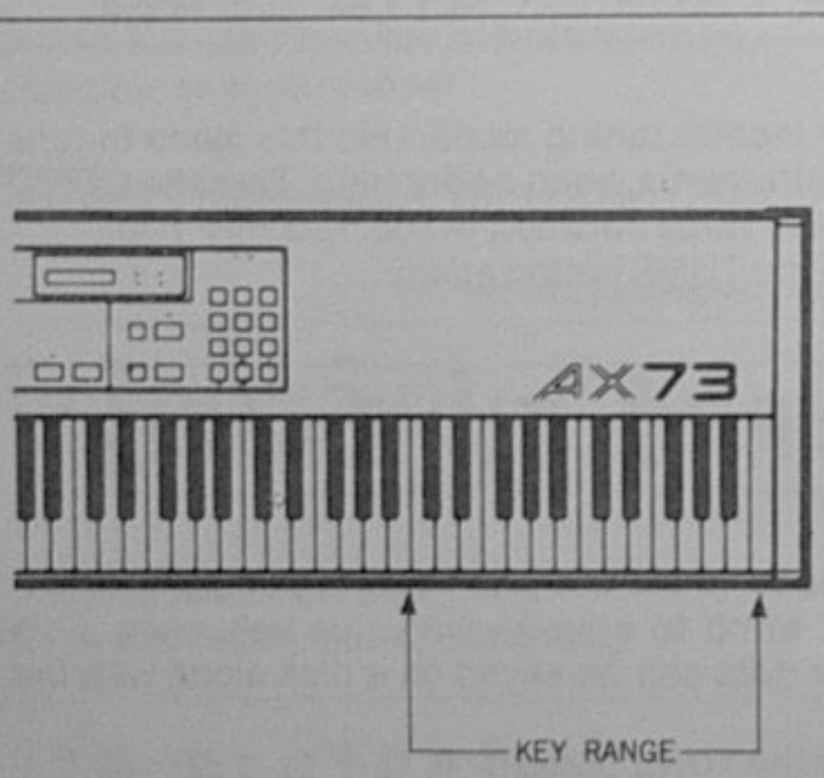
Press the TRANSPOSE button once again. The LCD will read:

```
CONST.PITCH =off
```

This is the normal mode in which the pitch of the sampled sound changes according to the key note. Now turn the CONTROL knob.

```
CONST.PITCH =on
```

In this mode, the pitch of the sampled sound is fixed to the original pitch, the transposed pitch, or the tuned pitch (explained later). When this mode is set, sound will be produced at the same pitch when any keys in the set key range are pressed.

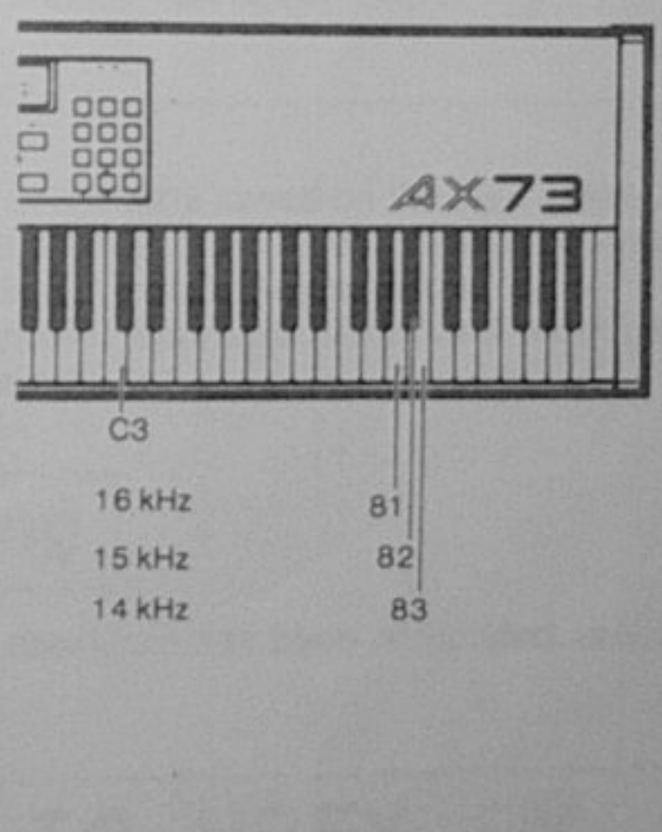


Same pitch for all keys

This function is handy for percussion sound effects in which differences in pitch are not desired.

Advice on Multi-Sampling

1. When playing back a sampled sound, if for example a sound sampled at the C3 position is played back by pressing the C3 key, the same pitch as the original sound will be produced. If however any other key is pressed, the recall speed changes so the pitch will also change.
   With the S700, the original pitch for a sound sampled at the C3 position with an audio bandwidth of 16 kHz is played back by pressing C3, and pressing up to G4# will produce a pitch higher than the original, but from A4 on this pitch cycle is repeated. Thus the pitch is linked to the audio range of the sampled sound.
   For a sound sampled at C3 with an audio range of 6.3 kHz, the pitch will begin repeating from MIDI note no. 97. If you wish to use the entire upper range of the keyboard, specify a key as high as possible as the sampling key.
   Also, by using the transpose function, repeat of the transposed section only can be set to begin lower.



2. Using the Resample
   If such pitch repeating occurs for a sound already saved on a disk or one that has just been sampled, the re-sample function (decreasing the sampling frequencies equivalently) can be used to move the point at which repeating begins to a higher key.

Press the TRANSPOSE button and set the resample mode.

```
S1:Resample  1/2
```

In this mode, the sample sound data is compressed by 1/2.

Turn the CONTROL knob. The LCD will read:

```
Crunching▪▪▪▪▪▪
```

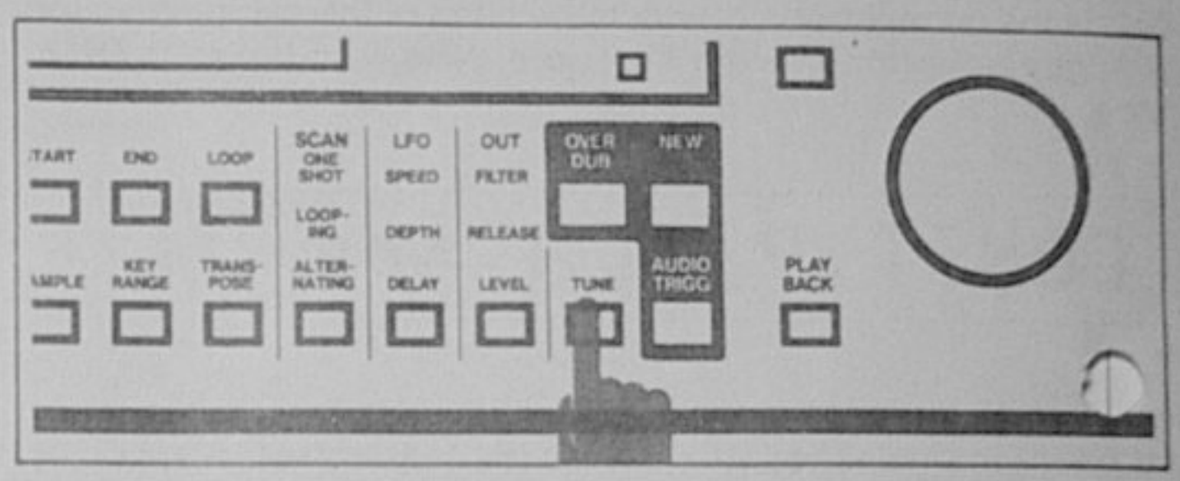
The data is now compressed. When compression is completed, the LCD will return to:

```
S1:Resample 1/2
```

NOTE: Since it is not possible to retrieve the original pitch once data is compressed, we recommend you save the original on a sampler disk. Compressed voice data can also be saved on a disk. Also note that when resampling is performed for pitches other than the highest key, the pitch will not increase, the harmonic structure will change, and the sound quality will deteriorate.

Tuning

With the S700's tuning function, it is possible to tune a sampled sound within a range of ±100 cents (one halfnote), and to save the tuning parameters along with the sampled data on a disk.
Press the TUNE button.




```
MASTER TUNE=+00
```

This is the master tuning mode. Use this mode to tune the pitch to other instruments when performing. Turn the CONTROL knob to change the value between −100 ~ 0 ~ +100.
Now press the TUNE button again.

```
S1:PRG TUNE=+00
```

Use this mode to set the pitch of the sampled sound. Turn the CONTROL knob to change the value betweeen −100 ~ 0 ~ +100. This data can be saved on a disk along with the sampled data.
Next, press the TUNE button.

```
Pitch wheel      12
```

In this mode, the pitch bend width is variable by one half step. Use the CONTROL knob to adjust it (0−12).

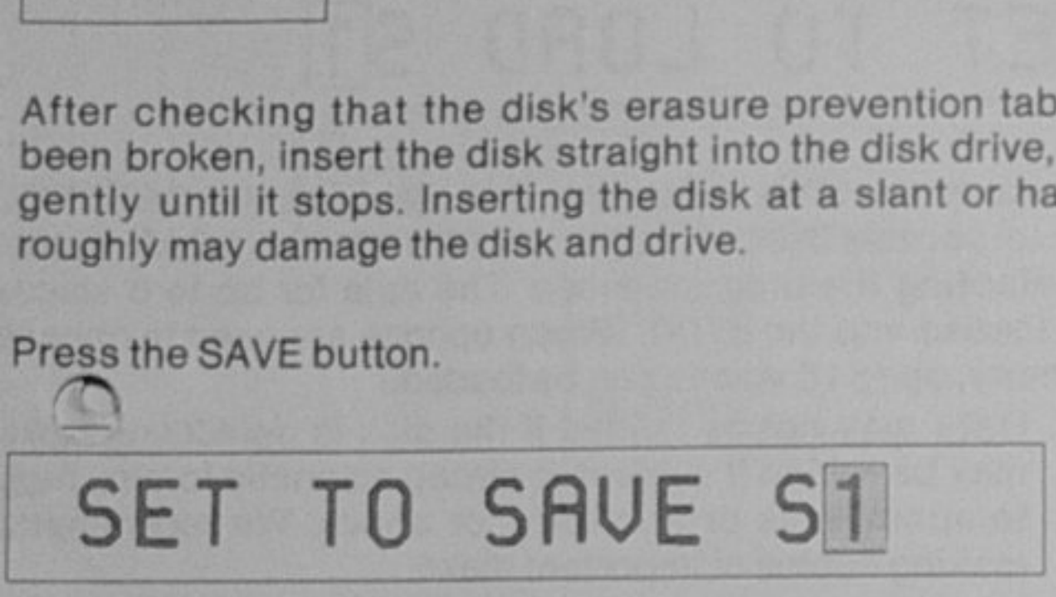
Save, Verify, and Load

With the S700, the program and sound data for two sampled sounds can be saved on a single 2.8 inch disk, one on each side. Furthermore, it is possible to load data for a maximum of 6 (or 16 when using the ASK70) sampled sounds into the S700's memory.

Saving

After checking that the disk's erasure prevention tab has not been broken, insert the disk straight into the disk drive, pushing gently until it stops. Inserting the disk at a slant or handling it roughly may damage the disk and drive.

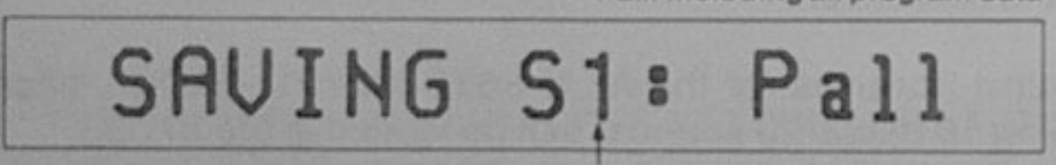
Press the SAVE button.



Use the CONTROL knob to set the sample number.
The X indicates the sample number.

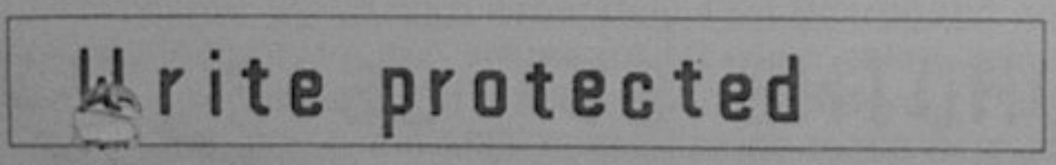
Now press the SAVE button again. The LCD will read:

Pall: including all program data



sample number

The data is now saved on the disk.
If the tab has been broken, the LCD will read:



If this happens, press the disk eject button, gently pull the disk out, and insert a new disk.

Data Saved on Disk

With the S700, the sampled sound data as well as the edited data and programming data for that sample number are all saved onto the disk at once.
As one full side of the disk is used to store the data for one sound, use one side of the disk for each sample number when sampling or editing two or more sounds.

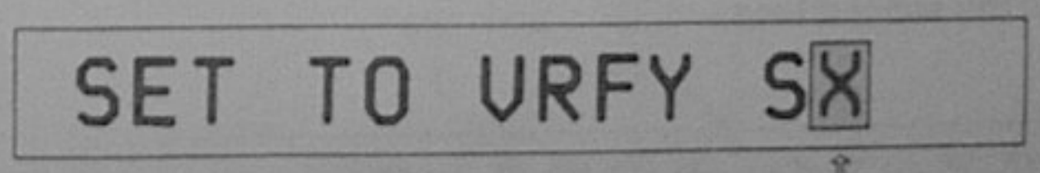
Content

- Sample sound digital data
- Scanning data (ONE SHOT, LOOPING, ALTERNATING, START, END, LOOP/SPLICE POINT)
- Key range
- Transpose
- Tune (PRG TUNE)
- LFO (SPEED, DEPTH, DELAY)
- OUT (FILTER, LEVEL, RELEASE)
- Program number
- Sample number
- Audio trigger playback mode (ON, OFF, NOTE)

Write a memo of the data saved on the disk's label. In particular, we suggest you keep the various disks together when using multiple point sampling and key splitting.
Note: The master tune and pitch bend width parameters are not saved.

Verifying

After the save operation has been completed, press the VERIFY button.



There is no need to set this.

This mode is used to check whether the saved data is properly stored on the disk.
Press the VERIFY button once again.

```
VRFYING S1: Pall
```

When the operation is completed, the LCD will read:

```
Verification OK
```

This indicates that everything is proper.
If the LCD reads:

```
Verify  error
```

Perform the save operation once again.
If an error still occurs, use a new disk.
NOTE: Some possible causes for errors are a defective disk or disk pad, or a dirty or worn head. If you think the unit is out of order, contact your nearest Akai dealer or service station.

```
Loading
```

Prepare a disk containing sampled sound data.
Insert the disk into the disk drive and press the LOAD button.
When loading the disk which has been made by another S700 or from the SL700 series sound library, the sample number will be shown automatically on the LCD, if the LOAD button is pressed again when "SX" appears on the LCD.
If you wish to change the sample number, reset the sample number using the CONTROL knob before the LOAD button is pressed the second time.

```
SET TO LOAD SX
```

Next press the PROGRAM button.
The display will read:

```
SET TO LOAD Pall
```

When the control knob is turned, Pall (Program all) changes from P32, P31 . . . to P1, and finally to P**.

Pall:	All SX key range programs set in P1 through P32 are loaded.
P1–P32:	Only the SX key range program for the specified program number is loaded.
P**:	Information other than program data is loaded.

In the Pall mode, if the LOAD button is pressed again,

```
LOADING S1: Pall
```

program mode

Loading is now being performed. When it is completed, the LCD will return to:

```
SET TO LOAD S1
```

Now remove the disk, insert the next disk, use the CONTROL button to set the sample number, and press the LOAD buttor after selecting the program mode. The data for up to 6 voices can be loaded into the S700. (When options are used to expanc the memory, up to 16 voices can be loaded.)
NOTE: Data may not be loaded if the disk is defective. ...sks may be ruined if subject to strong magnetic forces, high temperatures or humidity, or shock. We recommend making copies of important disks.

If the LCD should read:

```
Bad data on disk
```

the disk is defective.

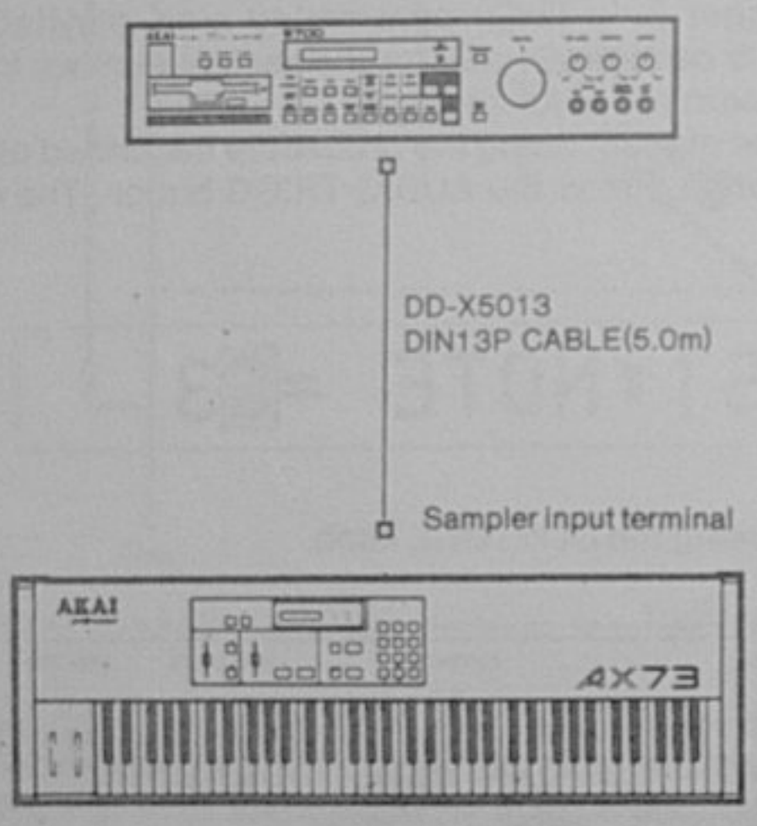
The sound libraries for the AKAI S612 (SL201–SL207, each containing 10 disks/20 sounds) can be loaded in the S700.
When loading a disk prepared on the S612, be sure to first specify the sample number.
When a disk prepared on the S612 is loaded, the following display will appear:

```
LOADING S1: S612
```

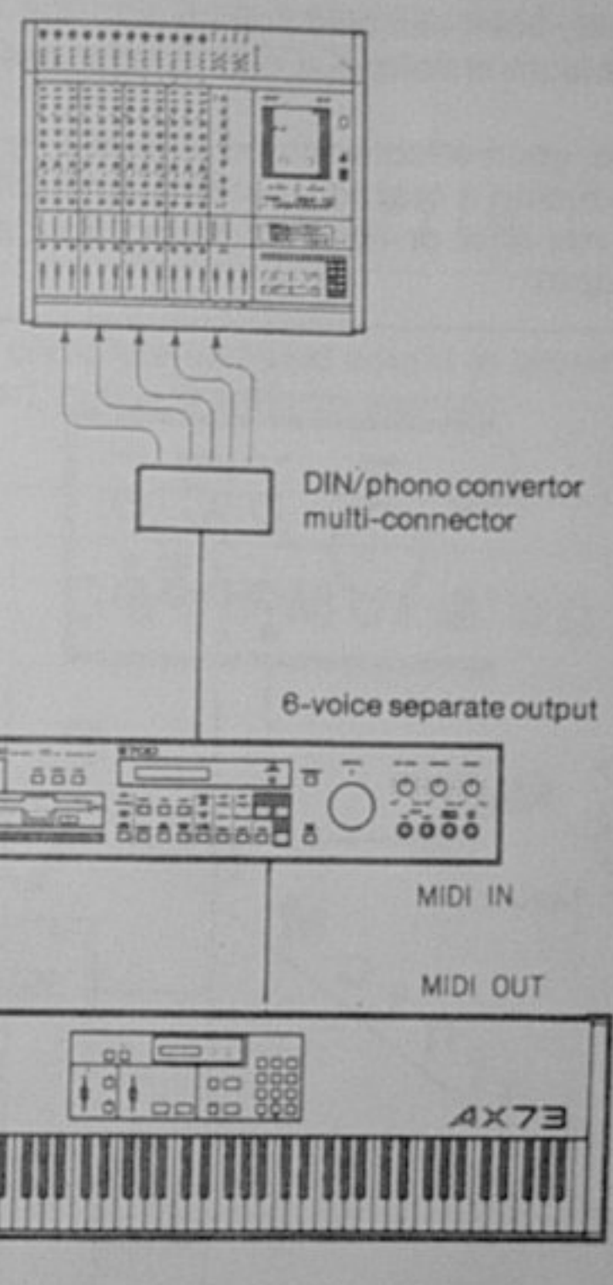
For disks prepared on the S612 as well, a maximum of 6 sounds can be loaded (or 16 sounds when using the ASK70 expansion memory).
When a disk prepared on the S612 is loaded, the voices will be stored at the same program number as the sample number.
S1 → P1
S6 → P6
S16 → P16
Disks prepared on the S612 are loaded and if verified, the LCD read Verify Error due to no program data in the disk. (This is not a fault of this machine.)
NOTE: Disks prepared on the S612 do not contain program data.
Also, disks prepared on the S700 cannot be loaded on the S612.

Separate Output

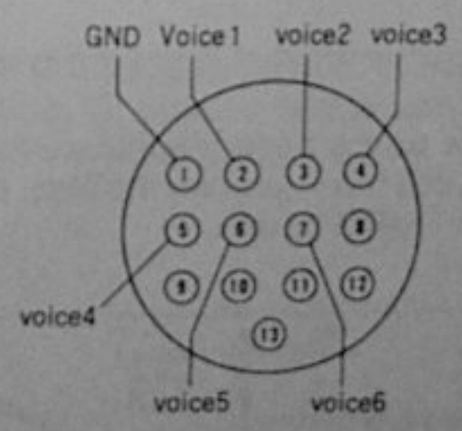
The S700 is equipped with a 13-pin DIN connector on the back panel, so the 6 voices can be output separately.
This output terminal can be connected to synthesizers such as the Akai AX60, AX73, or VX90, making it possible to process the sampled sounds using the synthesizer edit functions.



Use the separately sold Akai DD-X5013 13-pin DIN connector cable to connect to the synthesizer.
For directions on editing the sampled sounds using the synthesizer, refer to the synthesizer's manual.
Furthermore, by using a separately sold DIN/phono convertor multi-connector, up to 6 voices (or 16 when using options) can be output separately and distributed to the different channels of a mixer, etc. When the MIDI special mono mode or multi-mono mode is used, keyboard splitting or multi-track sequencing (automatic performing) with a MIDI sequencer can be used to create a stereo effect or to apply effects to each voice separately.



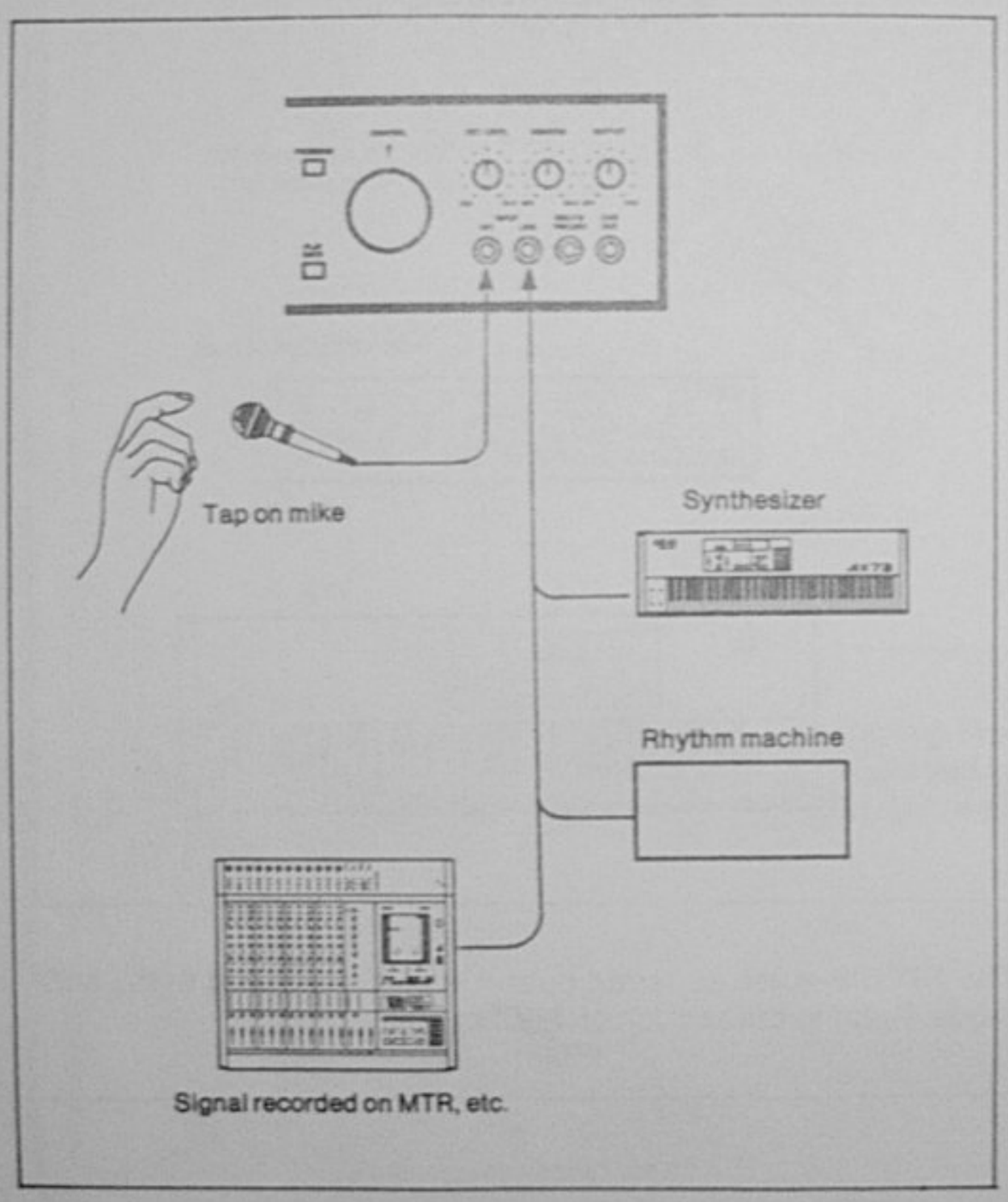
The S700 6-voice separate output is closely related to the MIDI mode. Refer to the section on MIDI modes.



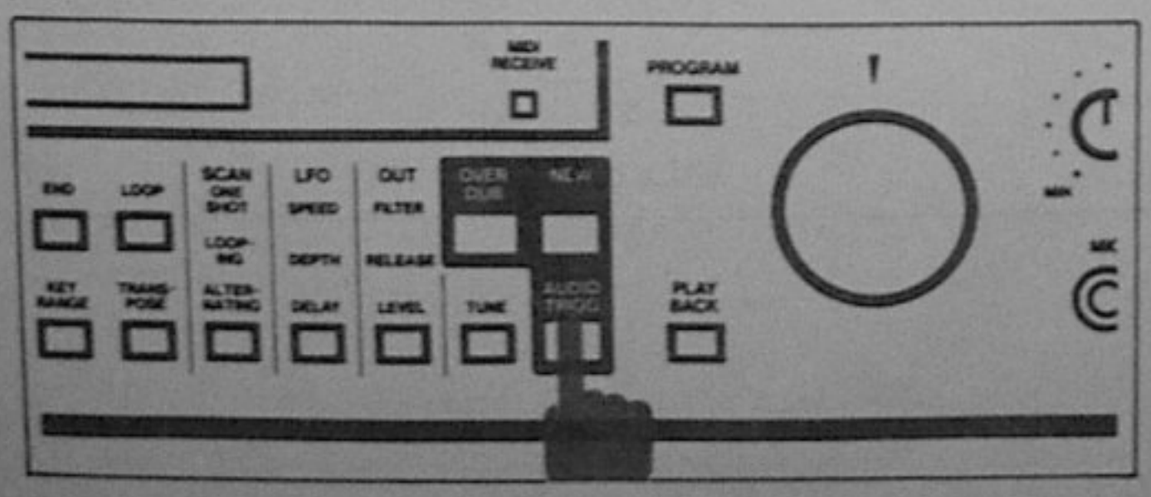
VOICE OUT terminal

Audio Trigger Playback

The S700 is designed for performance on a MIDI keyboard or MIDI sequencer, but external audio sources can also be used as triggers to play back sampled sounds.
Use as simple an envelope sound as possible as the audio trigger.
For example, good effects can be obtained by lightly tapping on a mike, producing a test tone intermittently from a synthesizer, or using a rim shot or cow bell sound from a rhythm machine separate output.



To perform playback using auto trigger, connect the trigger source to the MIC or LINE input jack on the front panel.
Now press the AUDIO TRIGG button.



The LCD will read:

```
P1:S1:TRIGG=Off
```

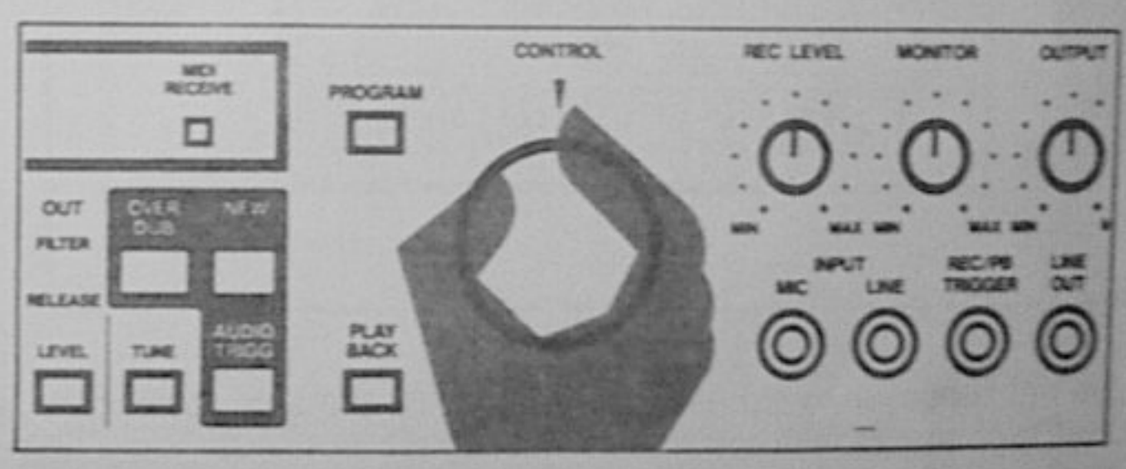
Turn audio trigger on by turning the CONTROL knob.

```
P1:S1:TRIGG=On
```

As audio trigger is in the programming area, playback using audio trigger is carried out only for the sample number indicated here when programmed for key split.
Set the sample number using the procedure described earlier.
Now set the pitch. Press the AUDIO TRIGG button. The LCD will read:

```
P1:S1:NOTE =C3
```

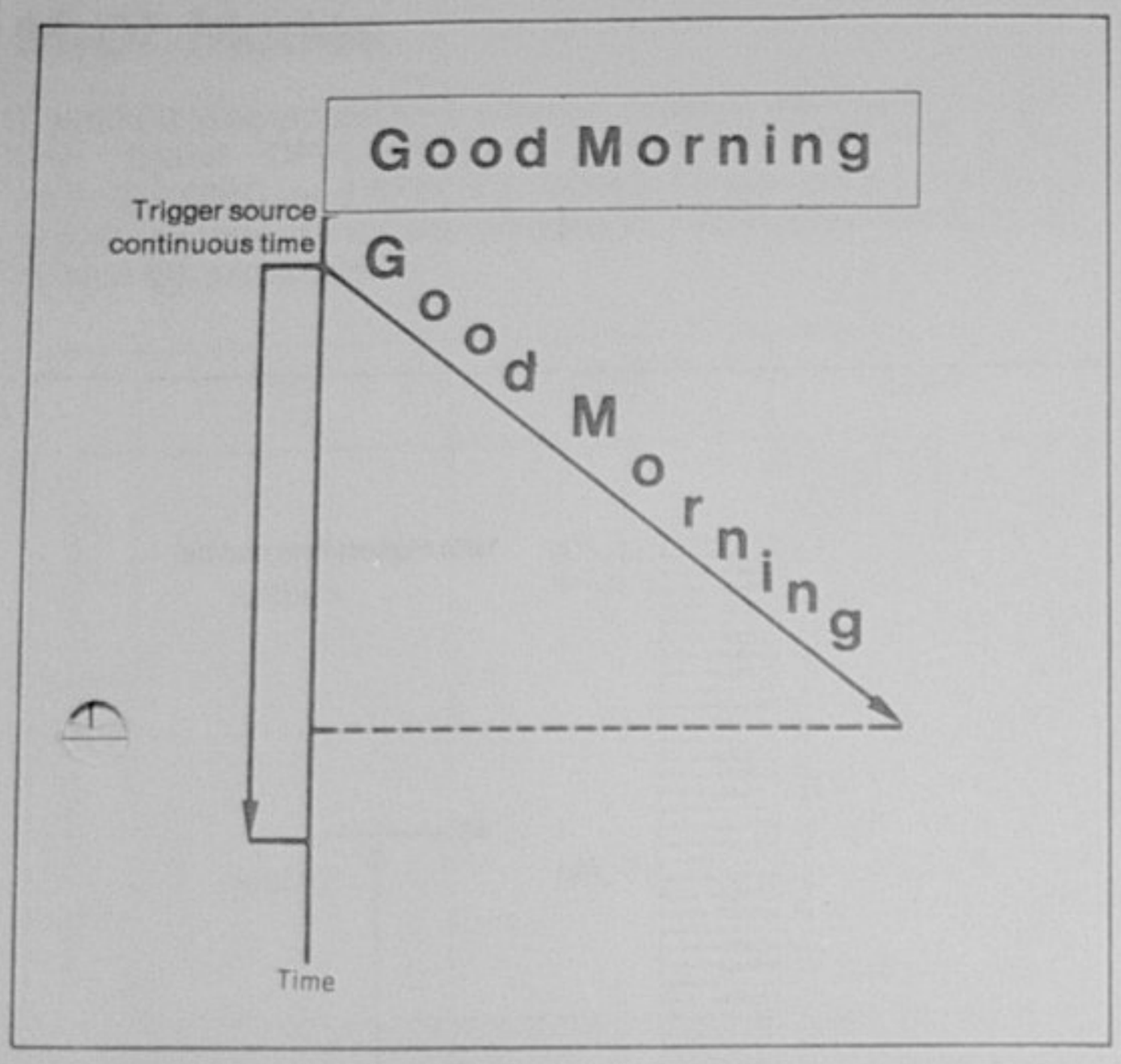
Set the pitch using the CONTROL knob.



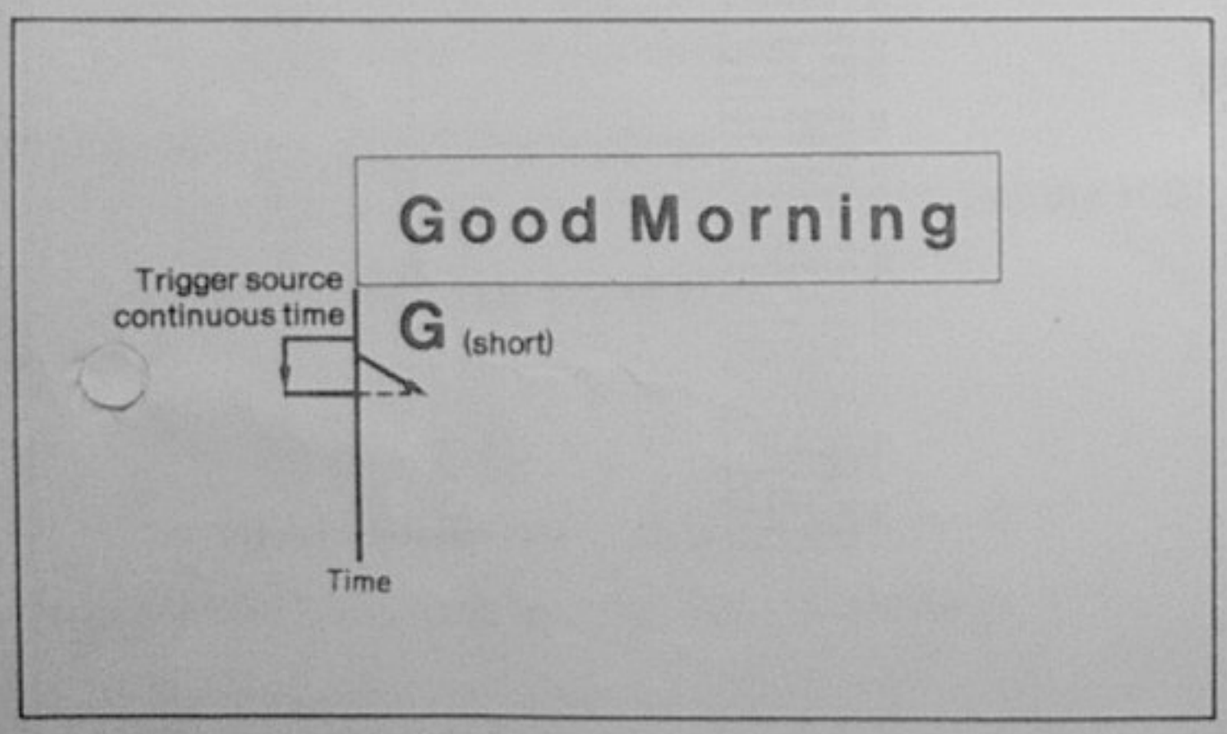
Now press the AUDIO TRIGG button again. The LCD will read:

```
ATG>
```

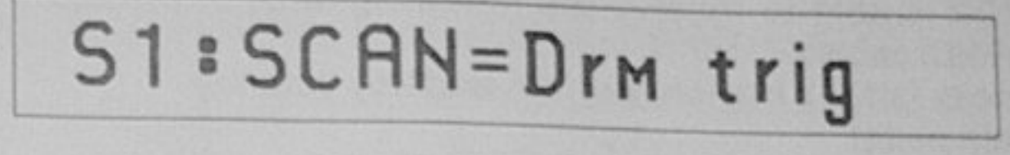
Use the CONTROL knob to set the desired trigger level.
Now choose a scanning mode suited to the trigger source. The sampled sound is played back fully or partially depending on the continuous time of the trigger source.



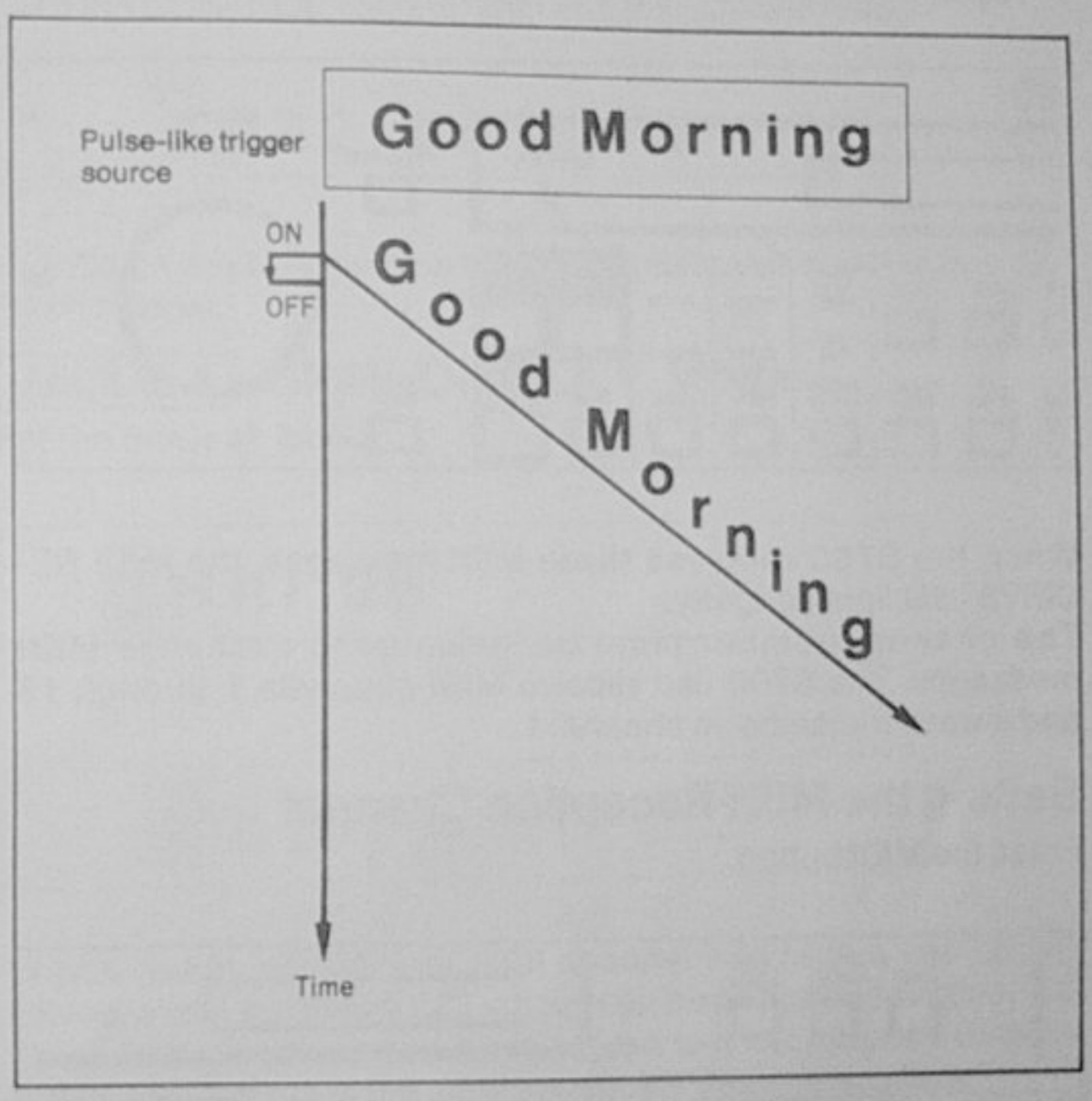
If the trigger source sound is longer than the recording time of the sampled voice data, the "Good Morning" will be played back completely. For a very short trigger source sound, only a short "G" will be played.



To use short pulse-like trigger sources such as tapping on the mike or rim shot sounds from a rhythm machine, press the SCAN button, then turn the CONTROL knob so the LCD reads:



In this mode, the complete sampled sound is played back (one shot), even for short, pulse-like trigger sources.

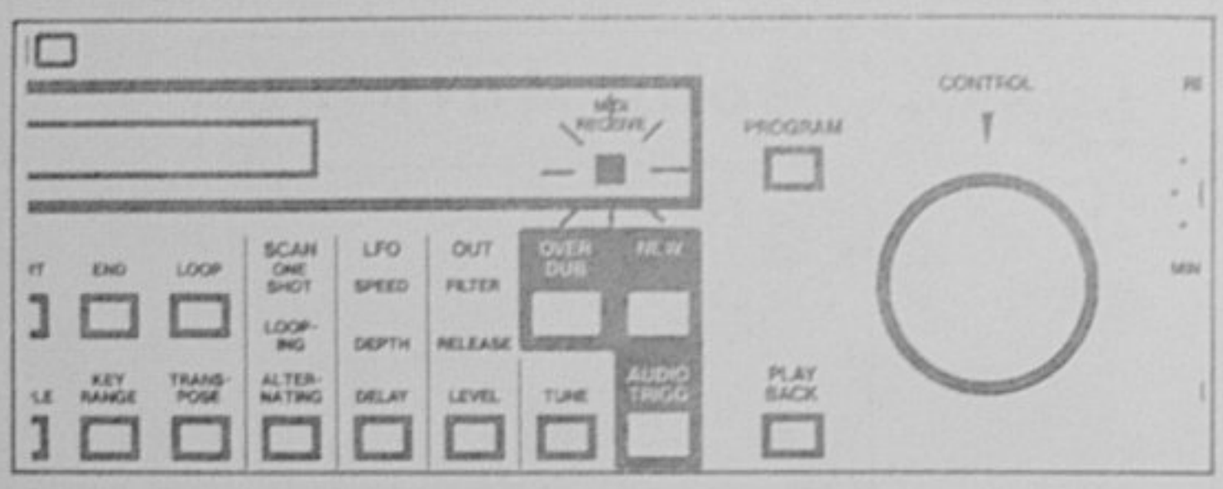


Use this mode for drums, percussion, or sound effects which require precise timing. Of course, this scanning mode can also be used for keyboard performances.

33
MIDI

MIDI (Musical Instrument Digital Interface) is the internationally recognized standard for electronic musical instruments. It is possible for MIDI instruments to exchange all kinds of information needed for musical performance by using MIDI cables.
The S700 is able to receive the following MIDI information through MIDI cables:

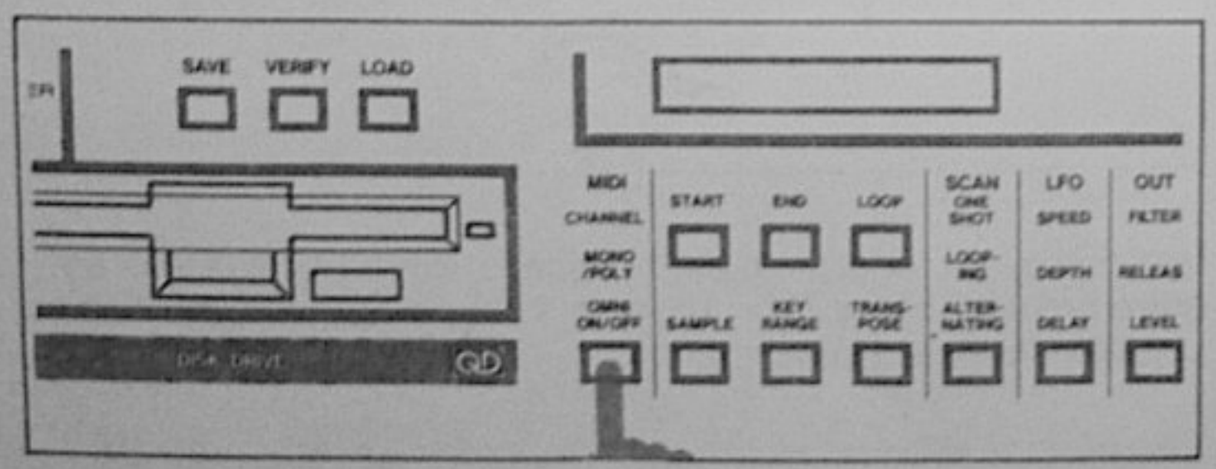
- Key note (pitch), key-on, key-off, and key velocity
- Sustain pedal
- Pitch bend
- Modulation wheel (vibrato)
- Mono/Poly mode changes
- System exclusive



When the S700 receives these MIDI messages, the MIDI RECEIVE LED lights brightly.
The channel number must be indicated to exchange MIDI messages. The S700 can receive MIDI channels 1 through 16 and always transmits on channel 1.

Setting the MIDI Reception Channel

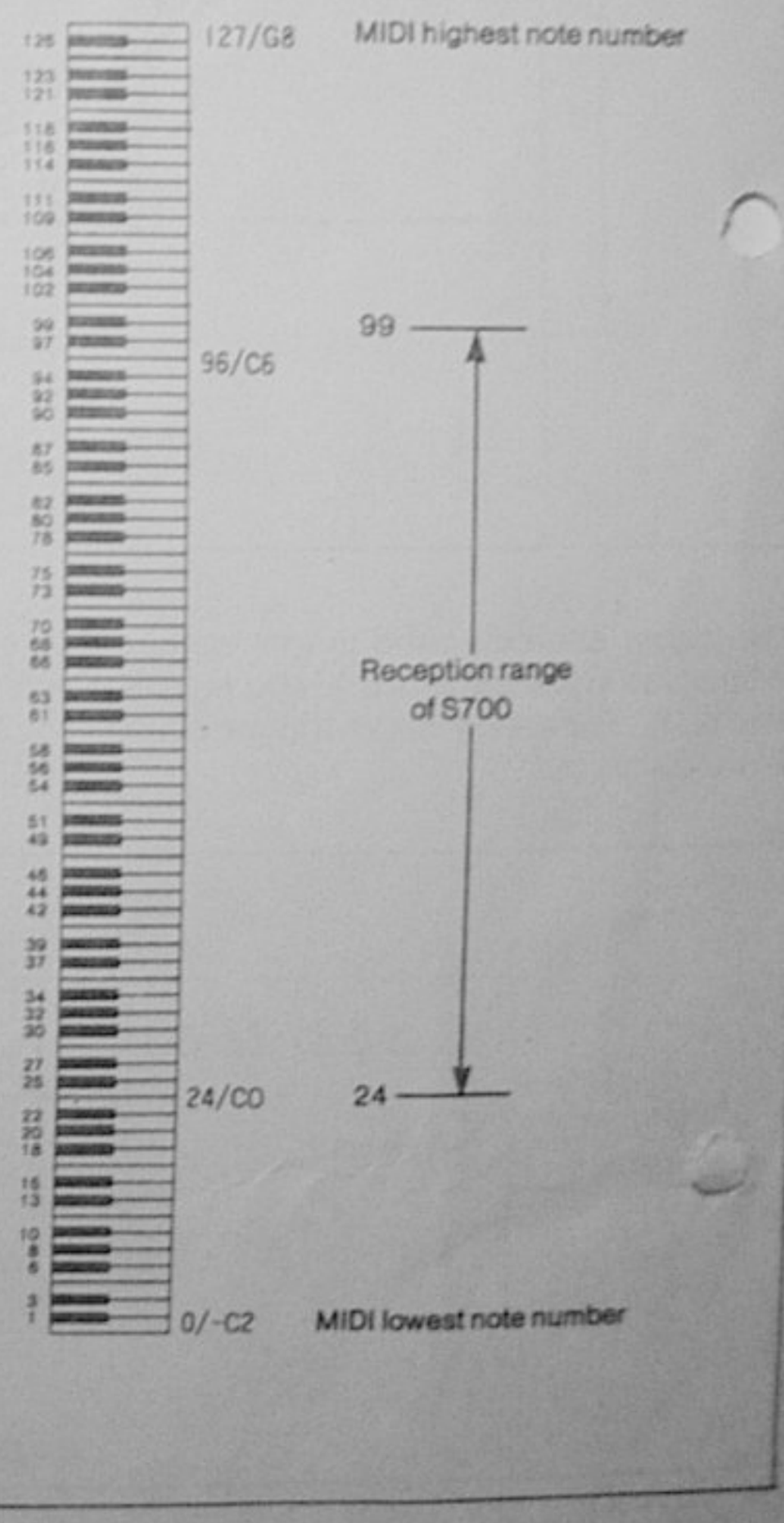
Press the MIDI button.



The LCD will read:

```
MIDI CHANNEL = 1
```

This is the MIDI channel setting mode. Turn the CONTROL knob to change the value between 1 and 16 and set to the desired MIDI reception channel.



MIDI Modes

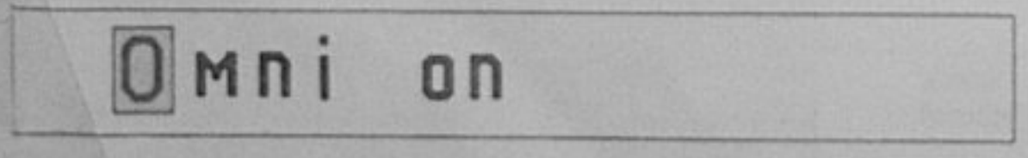
The S700 is equipped for 6 different types of MIDI modes: OMNI ON, OMNI OFF, MULTI PROGRAM, POLYPHONIC, MONOPHONIC, and SPECIAL MONO. These can be combined to create a total of 9 different modes, providing great possibilities for musical expression.

	OMNI ON	OMNI OFF	MULTI
POLYPHONIC	MODE 1	MODE 3 *	MODE 7
MONO PHONIC	MODE 2	MODE 4	MODE 8 *
SPECIAL MONO	MODE 5	MODE 6	MODE 9

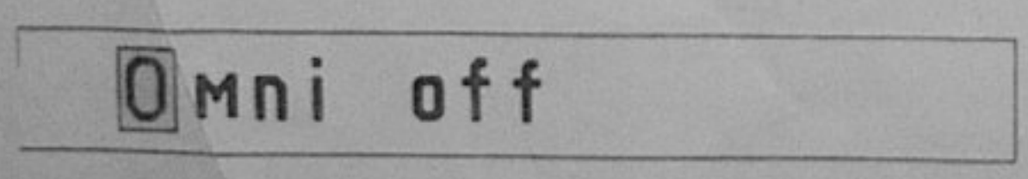
☐ Shaded modes are modes only available on the S700.
* These modes are for the DIN 13 pin separate output.

Mode Setting and Operation

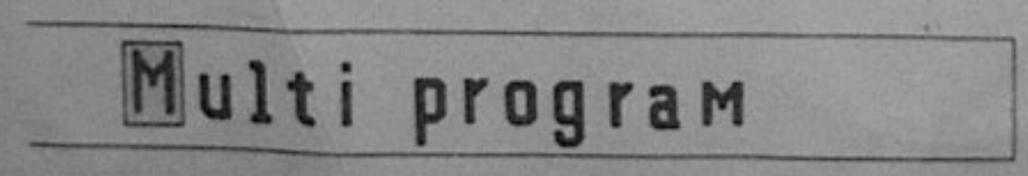
Use the MIDI button and the CONTROL knob to set the MIDI modes.
Press the MIDI button again. The LCD will read:



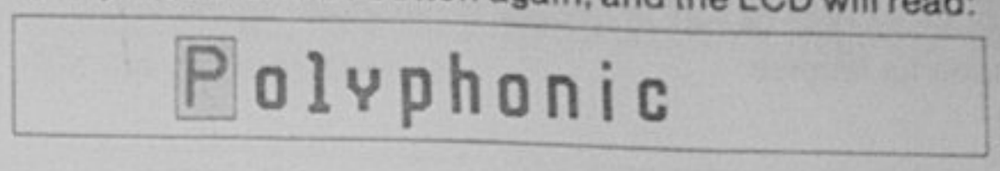
When the CONTROL knob is turned, the LCD will read:



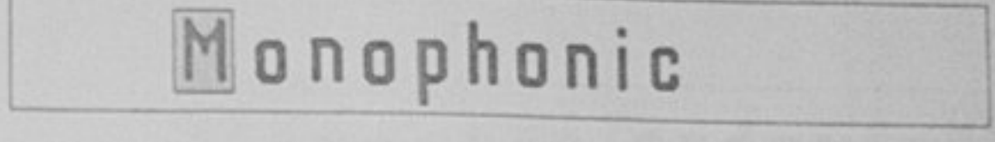
Turn the CONTROL knob further, and the LCD will read:



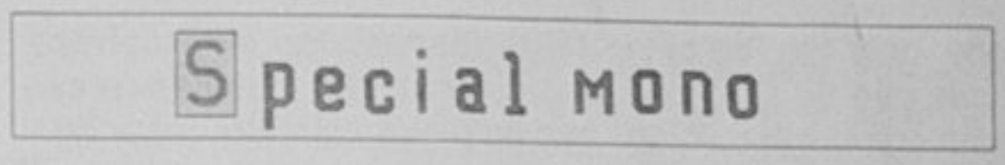
Now press the MIDI button again, and the LCD will read:



Turn the CONTROL knob, and the LCD will read:



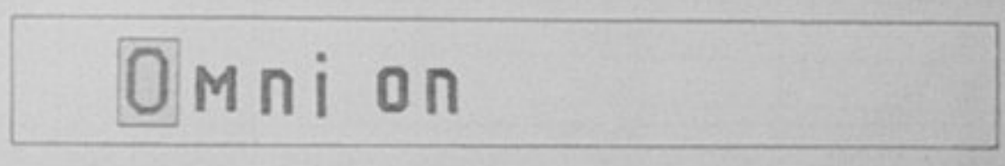
Turn the CONTROL knob further, and the LCD will read:

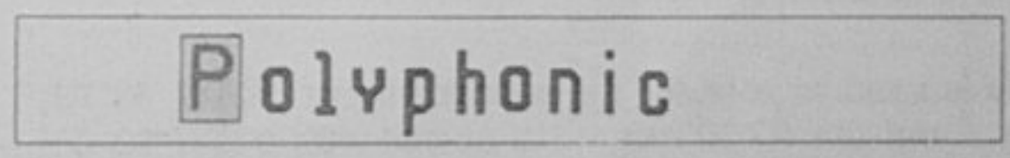


Now let us explain the operation of the different combinations of these modes.

MODE 1 OMNI ON/POLY Mode

Set the mode as follows:

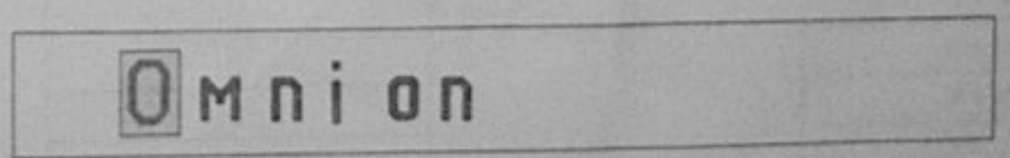


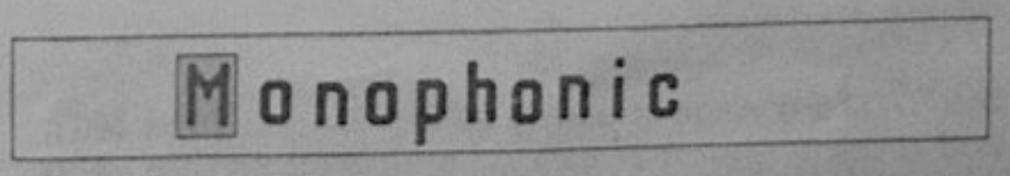


In this mode, all types of MIDI channel information can be received, and a maximum of 6 voices can be performed at once. The S700's 6 voices can be assigned to a set program number (polyphonic). This is the most commonly used mode.

MODE 2 OMNI ON/MONO Mode

Set the mode as follows:

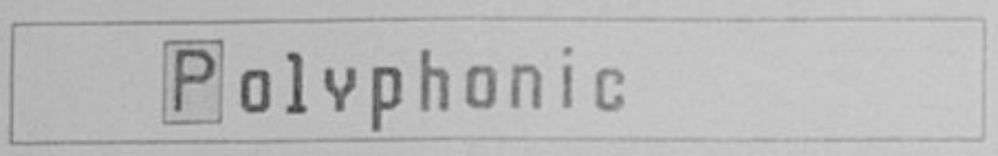




In this mode, all types of MIDI channel information can be received, but only one sound can be played.
Only one voice can be assigned to a set program number and output from the S700.

MODE 3 OMNI OFF/POLY Mode

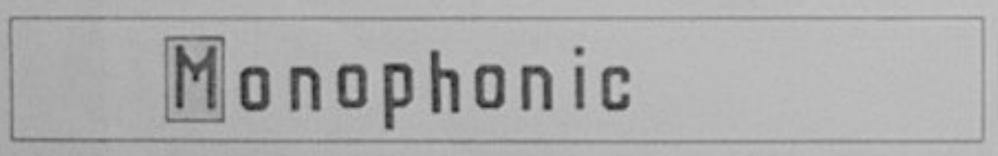
Set the mode as follows:



In this mode, only the indicated MIDI channel can be received, and 6 voices can be assigned to a set program number (polyphonic), so maximum of 6 voices can be played simultaneously.

MODE 4 OMNI OFF/MONO Mode

Set the mode as follows:



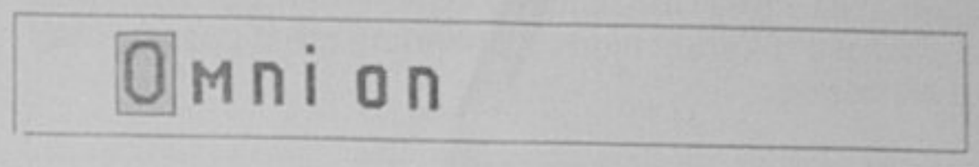
This mode is used to connect the sampler input (VX90, AX73, AX70, etc.) and the S700 separate output with a DIN 13 pin cable and edit the sampled data on the synthesizer. The 6 MIDI channels are received and each channel is output from a specific terminal, so a single sound is produced for each MIDI channel.

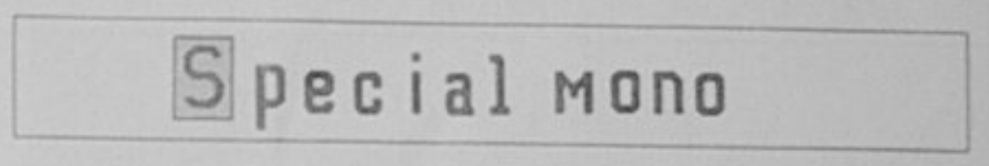
MIDI CH Number	Program Number	Voice Number
Mn	1 ~32	1
Mn+1		2
Mn+2		3
Mn+3		4
Mn+4		5
Mn+5		6
Mn: MIDI channel number setting (1 — 16)		

By using the S700's 6 voice separate output function, the MIDI channel and program number can be switched so that each voice can be output and played separately. (Refer to Page 30).

MODE 5 OMNI ON/SPECIAL MONO Mode

Modes 5—9 are MIDI modes which are only available on the S700.





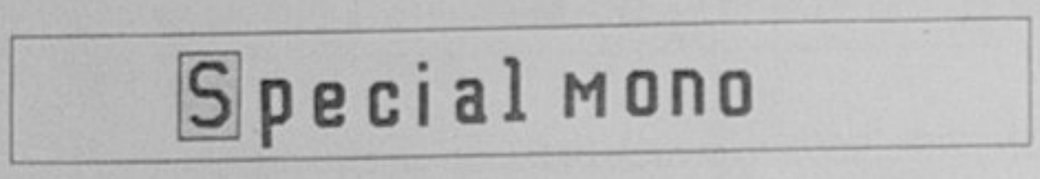
In this mode, all MIDI channels can be received, and the sample numbers correspond to the voice numbers, so one sound is played for one voice. When the maximum of 6 voices are set using the key split function, each voice can be played separately, one sound per voice.
This mode is great when using the 6 voice separate output function. Use it in particular to split drums, percussion, sound effects, and other voices into small groups.

MIDI CH Number	Sample Number	Voice Number
ALL (1~16)	1	1
	2	2
	3	3
	4	4
	5	5
	6	6
	* 7	1
	8	2
	9	3
	10	4
	11	5
	12	6
	13	1
	14	2
	15	3
	16	4

* Sample numbers 7—16 are only possible when using options.

MODE 6 OMNI OFF/SPECIAL MONO Mode

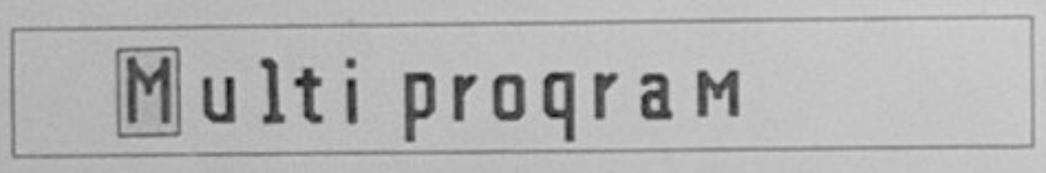
Set the mode as follows:

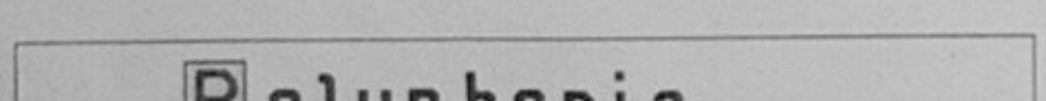


This mode operates basically in the same way as mode 5, but only with one specified MIDI channel.

MODE 7 MULTI PROGRAM/POLY Mode

Set the mode as follows:



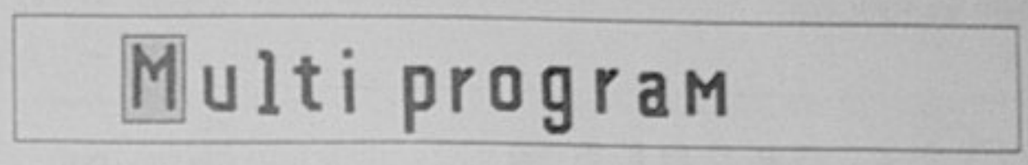


In this mode, multiple MIDI channels are received. MIDI channels 1～16 correspond to program numbers P1～16 (or P17～32), and the programs are assigned in polyphonic for the 6 voices. It is thus possible to play a maximum of 6 voices for each channel. However, the maximum number of voices which can be produced simultaneously for multiple channels remains 6.
This mode is great for multi-track performance using a MIDI sequencer or the like.

MIDI CH Number	PROGRAM Number	Voice Number
1	1 (17)	Polyphonic Assign
2	2 (18)	
3	3 (19)	
4	4 (20)	
5	5 (21)	
6	6 (22)	
7	7 (23)	
8	8 (24)	
9	9 (25)	
10	10(26)	
11	11(27)	
12	12(28)	
13	13(29)	
14	14(30)	
15	15(31)	
16	16(32)	

MODE 8 MULTI PROGRAM/MONO Mode

Set the mode as follows:

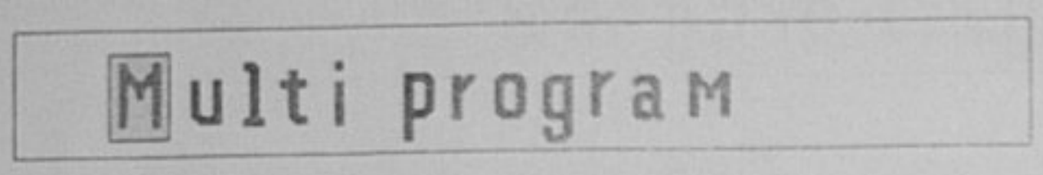


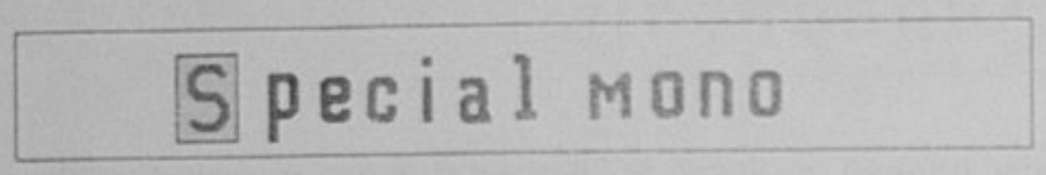
In this mode, as well, multiple MIDI channels are received. MIDI channels 1～16 correspond to program numbers P1～16 (or P17～32), and the program numbers correspond to the various specified voice numbers.
Thus, a single sound is produced for each MIDI channel. This mode is great for multi-track automatic performance of separate outputs using a MIDI sequencer or the like.

MIDI CH Number	PROGRAM Number	Voice Number
1	1 (17)	1
2	2 (18)	2
3	3 (19)	3
4	4 (20)	4
5	5 (21)	5
6	6 (22)	6
7	7 (23)	1
8	8 (24)	2
9	9 (25)	3
10	10 (26)	4
11	11 (27)	5
12	12 (28)	6
13	13 (29)	1
14	14 (30)	2
15	15 (31)	3
16	16 (32)	4

MODE 9 MULTI PROGRAM/SPECIAL MONO Mode

Set the mode as follows:





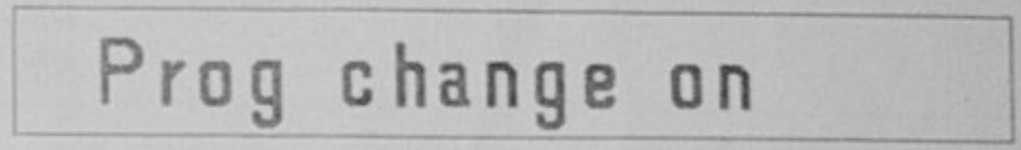
In this mode, as well, multiple MIDI channels are received. MIDI channels 1~16 correspond to program numbers P1~16 (or P17~32), and the sample numbers included in the programs correspond to the various specified voice numbers. Thus, a single sound is produced for each sample. (The maximum number of voices which can be produced simultaneously is 6.) This mode is also great for multi-track automatic performance of separate outputs using a MIDI sequencer or the like.

MIDI CH Number	PROGRAM CH Number		SAMPLE Number	Voice Number
1	1 (17)		1	1
2	2 (18)		2	2
3	3 (19)		3	3
4	4 (20)		4	4
5	5 (21)		5	5
6	6 (22)		6	6
7	7 (23)		* 7	1
8	8 (24)		8	2
9	9 (25)		9	3
10	10 (26)		10	4
11	11 (27)		11	5
12	12 (28)		12	6
13	13 (29)		13	1
14	14 (30)		14	2
15	15 (31)		15	3
16	16 (32)		16	4

* Sample numbers 7—16 are only possible when using options.

Receiving Program Changes

With the S700, MIDI program change information can be received from a keyboard or sequencer to select the S700's program number.



Use the CONTROL knob to switch between on and off.

[MIDI DIGITAL SAMPLER]
Model S700 MIDI Implementation Chart Version :1.0

Function ...		Transmitted	Recognized	Remarks
Basic Channel	Default	×	1	
	Changed	×	1 - 16	
Mode	Default	×	Mode 1	
	Messages	×	Omni on/off,P/M	
	Altered	**********	×	
Note Number : True voice		×	0 - 127	
		**********	24 - 96	
Velocity	Note ON	×	○ 9n v=1-127	
	Note OFF	×	○ 9n v=0 or 8n v=1-127	
After Touch	Key's	×	×	
	Ch's	×	○	
Pitch Bender		×	○	
Control Change	1	×	○	Modulation wheel
	64	×	○	Sustain pedal
Prog Change : True #		×	○	
		**********	1 - 32	
System Exclusive		○	○	ID:47
System : Song Pos		×	×	
: Song Sel		×	×	
Common : Tune		×	×	
System : Clock		×	×	
Real Time : Commands		×	×	
Aux :Local ON/OFF		×	×	
:All Notes OFF		×	○ (123)	
Mes- :Active Sense		×	×	
sages:Reset		×	×	
Notes				

Mode 1 : OMNI ON, POLY Mode 2 : OMNI ON, MONO ○ : Yes
Mode 3 : OMNI OFF, POLY Mode 4 : OMNI OFF, MONO × : no

AKAI
AKAI ELECTRIC CO., LTD.
12-14, Higashi-Kojiya, 2-chome,
Ohta-ku, Tokyo, 144 Japan

61083081
611025-1
Printed in Japan

Specifications

System:
12-bit sampling
Sampling frequency: 4 kHz—40 kHz
Sampling time: 8 sec.—0.8 sec.
Frequency response: 25 Hz—16 kHz
No. of voices: 6
Range: 6 octaves

Storage:
2.8-inch disk drive
Memory capacity: 128 K byte (total of sides A and B)
No. of tracks: 1 (spiral)
Memory medium: 2.8-inch disk
Medium lifespan: Approx. 2,000 passes
Internal memory: 6 sample sounds (expandable to 16 using optional memory board)

Functions:
Recording level: MIN—MAX
Monitor level: MIN—MAX
Output level: MIN—MAX
Recording modes: New/overdub
Editing section: Scan (start/end/loop)
scan modes (one shot, loop, alternating, drum trigger,
auto loop, reverse, forward)
LFO: (speed, depth, delay)
Output: (release, level, filter, velocity)
Tune: (master tuning ±100 cents, program tuning ±100 cents)
Transpose: (±5 octaves, constant pitch on/off)
Key range: (MIDI notes 24—99)
Auto trigger: (on/off, MIDI note number)
Play key
Samples: (1, 2, 3, 4, 5, 6)
(16 when using optional memory board)

MIDI:
MIDI channels (1—16)
OMNI ON (special mono, mono, poly)
OMNI OFF (special mono, mono, poly)
MULTI mode (special mono, mono, poly)

Data: Save, verify, load

Display: LCD (liquid crystal display)

External jacks:
MIDI (IN/OUT/THRU)
MIC INPUT jack for audio trigger
LINE INPUT jack for audio trigger
LINE OUTPUT jack (one each on front and rear)

Power requirements:
120 V, 60 Hz for USA and Canada
220 V, 50 Hz for Europe except UK
240 V, 50 Hz for UK and Australia

Dimensions: 482.6 (W) × 88.1 (H) × 267 (D) mm

Front panel: 2 U/EIA rack mountable type

Weight: 7 kg

* For improvement purposes, specifications and design are subject to change without prior notice.